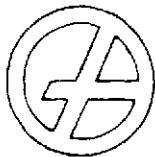




SDMS DocID 000230869



Golder Associates Inc.
CONSULTING ENGINEERS

Industri-Plex
6.04
SDMS #1 230869

PRE-DESIGN INVESTIGATION
SLUG TEST REPORT
INDUSTRI-PLEX SITE
WOBURN, MASSACHUSETTS

11480
0212-2.2

Prepared for:

Industri-Plex Site Remedial Trust
800 North Lindbergh Boulevard
St. Louis, Missouri 63167

DISTRIBUTION:

- 8 Copies - Industrial Site Remedial Trust
- 6 Copies - U.S. Environmental Protection Agency
- 1 Copy - Massachusetts Dept. of Environmental Protection
- 1 Copy - NUS Corporation
- 2 Copies - Golder Associates Inc.
- 1 Copy - Roux Associates

January 1991

Project No.: 893-6255



File No. 0212-2.2

087-N-645

RECEIVED

JAN 3 1 1991

NUS Corporation
Woburn, MA



Golder Associates Inc.

CONSULTING ENGINEERS

January 30, 1991

Project No. 893-6255

United States Environmental Protection Agency, Region 1
J.F.K. Federal Building, HRS-CAN3
Boston, Massachusetts 02203-2211

Attn: Joseph DeCola
Remedial Project Manager

RE: PRE-DESIGN INVESTIGATION SLUG TEST REPORT
INDUSTRI-PLEX SITE, WOBURN, MASSACHUSETTS

Gentlemen:

On behalf of the Industri-Plex Site Remedial Trust, we are submitting the attached Slug Test Report for the Industri-Plex Site in Woburn, Massachusetts. This report is being submitted in accordance with the slug test work plan submitted to the Agencies on November 28, 1990.

Please contact us if you have any questions.

Very truly yours,

GOLDER ASSOCIATES INC.

Kenneth R. Moser, Associate
Project Manager

KRM/krm
62550129

cc: J. Naparstek, MDEP
A. Ostrofsky, NUS
D. Baumgartner, ISRT
W. Smull, ISRT

<u>SECTION</u>	<u>PAGE</u>
COVER LETTER	i
TABLE OF CONTENTS	ii
EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	3
2.0 FIELD TEST PROCEDURES	4
3.0 DATA ANALYSIS METHODS	6
3.1 Hvorslev Method	6
3.2 Bouwer and Rice Method	8
4.0 EVALUATION OF THE SLUG TEST RESULTS AND COMPARISON WITH THE PUMPING TEST RESULTS	11
4.1 Comparison between Hvorslev and Bouwer and Rice Results	11
4.2 Comparison between Pumping Test and Slug Test Results	11
4.3 Discrepancies between Pumping Test and Slug Test Results	12
5.0 RESULTS	14
6.0 CONCLUSIONS	15

LIST OF TABLES

- Table 1 - Industri-Plex Site Wells for Study
Table 2 - Industri-Plex Site Slug Test Results Hvorslev Analysis
Table 3 - Bouwer and Rice Analysis - Rising Head Test
Table 4 - Bouwer and Rice Analysis - Falling Head Test
Table 5 - Industri-Plex Site Slug Test Results - Bouwer and Rice Analysis
Table 6 - Comparison of Slug Test Values
Table 7 - Formation at Screened Interval
Table 8 - Comparison of Slug and Pumping Test Horizontal Hydraulic Conductivity Values
Table 9 - Slug Test Hydraulic Conductivity Values Sorted on the Ratio of y/L_m (Refer to Figure 1 for Notation).

LIST OF FIGURES

- Figure 1 - Graphical Representation of Variable Head Test Parameters
Figure 2 - Interpreted Distribution of the Hydraulic Conductivity

LIST OF APPENDICES

Appendix A - Slug Test Procedure
Appendix B - Well Dimensions
Appendix C - Variable Head Test Data
Appendix D - Graphical Details for Hvorslev Method Analysis
Appendix E - Graphical Details for Bouwer and Rice Method
Analysis
Appendix F - Slug Test Data

EXECUTIVE SUMMARY

Slug tests were carried out on predetermined test wells at the Industri-Plex Site, Woburn, Massachusetts to determine the spatial variability of hydraulic conductivity at the site. The objectives of the work were (1) to compare slug test derived hydraulic conductivities in the pumping test area with pumping test values and, if the results were comparable, to determine if slug test data from the future extraction system area and pumping test data were similar; and (2) to provide the basis for adjusting the pump test data to conditions found in the future extraction system area if the slug test results showed different hydraulic conductivities in this area. The data for the rising-head and falling-head tests were analyzed using the Hvorslev method (Hvorslev, 1951) and Bouwer and Rice method (Bouwer and Rice, 1976; Bouwer, 1989). Each method produced two hydraulic conductivity values, one from rising-head test data, the other from falling-head test data. Therefore, four hydraulic conductivity values were obtained from each well. One well, OW-16, provided invalid data that could not be analyzed. The results showed that the hydraulic conductivity values determined by both methods for each well compare reasonably well.

Arithmetic average values were obtained from the four values for each well. The slug test hydraulic conductivity values in the pumping test area were then compared with the pumping test results for the same wells. Generally, they produced approximately the same results. The reasons for discrepancies between some wells are explained by energy losses during slug testing in the deeper wells or in wells with long screened intervals. The main conclusion from this work is that the hydraulic conductivity values obtained in the future extraction system area near well OW-18A are comparable to the values obtained in the pumping test area,

although the aquifer thickness is less in the future extraction system area. Therefore, the hydraulic conductivity values obtained from the pump test do not have to be adjusted for use in designing the groundwater extraction system. Hydraulic conductivity contours for the site were generated using the slug and pumping test results.

1.0 INTRODUCTION

Aquifer heterogeneities that may occur in the area where the future extraction system will be installed were evaluated by a series of slug tests conducted in wells within the Industri-Plex Site, close to the proposed locations of the extraction system, as well as in the observation wells that were installed for the aquifer pumping test (Golder Associates Inc., 1990).

The objectives of the work were (1) to compare slug test derived hydraulic conductivities in the pumping test area with the pumping test values and, if the results were comparable, to determine if slug test data from the future extraction system area and pumping test data were similar; and (2) to provide the basis for adjusting the pump test data to conditions found in the future extraction system area if the slug test results showed different hydraulic conductivities in this area. The 30 wells that were tested are listed in Table 1. The wells that were tested in the vicinity of the pumping test were selected to obtain slug test data to complement the pumping test data. The other wells were selected because their location is within the known extent of the plumes, or adjacent to them. The slug tests provide in situ hydraulic conductivity data for the extraction system design. Two different methods were used for the field data analysis. In the following sections, the field test procedures, data analysis methods, and results are presented.

2.0 FIELD TEST PROCEDURES

Golder Associates Inc. (Golder Associates) performed slug tests in 30 wells at the Industri-Plex Site in Woburn, Massachusetts during the week of November 5, 1990. The wells tested are listed in Table 1.

The field procedures followed were those set forth in Golder Associates Technical Procedure for Conducting Rising and Falling Head Slug Tests (Appendix A) and Golder's Site Health and Safety Plan for the site.

Slug tests were performed by quickly adding a PVC (Poly Vinyl Chloride) slug (see construction specifications below) to displace a volume of water and monitoring the subsequent rate of return to equilibrium (falling-head test). Once this equilibrium was reached the slug was quickly removed, causing a depression in the water level; the subsequent rate of return to equilibrium was again monitored (rising head test). Well dimensions for each well tested are given in Appendix B.

The slugs were constructed using five foot long sections of 1 inch and 2 inch diameter schedule 40 PVC filled with #1 well sand as ballast. The slugs were sealed using Teflon wrapped PVC end caps and checked for leakage before any field work. The 1 inch diameter slugs were used for the 2 inch wells and the 2 inch diameter slugs were used for the larger wells. Prior to testing each well, air monitoring was conducted in the well head area using an HNU and a H₂S meter to check for the presence of hydrogen sulfide and volatile organic compounds. After monitoring the well head area the total well depth and depth to water were measured using a Solinst water level meter.

A vibrating wire transducer was then hand lowered into the well to a depth which allowed for total slug submersion

without contact with the transducer or well bottom, and allowed to stabilize. Once stabilization was obtained, the tests were conducted. A slug was then quickly lowered into the well displacing a volume of water. The water level was then monitored and recorded at a set scan interval using a portable computer and datalogger attached to the transducer. Once the water level returned to the initial value the slug was removed and the water level was monitored again as it approached equilibrium. Most well recovery rates were initially monitored on two second intervals. This interval was increased to 5 seconds or longer as the recovery rate decreased. However, some wells, particularly the aquifer test area wells (signified by the prefix TW) and others nearby indicated almost instantaneous recovery rates. These wells were monitored on 1 second or shorter intervals. The recorded information was downloaded from the datalogger to a floppy disc and saved after each test. A backup copy of each test file was made to avoid loss of test data. A computer disc containing the slug test field data is included in Appendix F.

3.0 DATA ANALYSIS

The data collected from the rising-head and falling-head tests are presented in Appendix C. Both the Hvorslev method (Hvorslev, 1951) and Bouwer and Rice method (Bouwer and Rice, 1976; Bouwer, 1989) were used in analyzing the field data.

The theoretical analysis of each method is based on the following assumptions:

- o Water is removed from the piezometer or added to the piezometer instantaneously;
- o The aquifer is homogeneous and isotropic;
- o Darcy's law is valid;
- o Both soil and water are incompressible;
- o The aquifer extends to infinity in all directions;
- o The position of the water table does not change with time;
- o Flow above the water table (in the capillary fringe) can be ignored;
- o The aquifer is uniform with depth;
- o Head losses as water enters the well (well losses) are negligible.

Because the slug test effective radius is small and the applied head differential is small, the first eight assumptions above are not considered to be violated to the extent that results would be erroneous. The last assumption, however, can be violated under certain circumstances and this assumption is discussed with regard to certain tests in Section 4.0 of this report.

3.1 Hvorslev Method

The Hvorslev method (Hvorslev, 1951) requires the plotting of the head difference ratio on the vertical scale of

semilogarithmic paper versus time on the linear horizontal scale. The graphical details for the method are given in Appendix D. The straight-line portion of the graphs are used to determine the hydraulic conductivity. For scattered data points, average straight lines were drawn and used in the analysis.

The hydraulic conductivity was calculated for each well data using the following formulas (Hvorslev, 1951, Page 44, Fig. 18, Case G):

$$K_h = \frac{r_c^2 \ln \left(\frac{L_w}{r_c} \right)}{2L_w (t_2 - t_1)} \ln \left(\frac{y_1}{y_2} \right) \quad \text{for } \frac{L_w}{r_c} > 8 \quad (1)$$

where

- K_h = horizontal hydraulic conductivity (L/T);
- r_c = radius of the casing (L);
- L_w = distance between the bottom of casing;
and water table (L);
- y_1 = head difference in the well at time t_1 (L);
- y_2 = head difference in the well at time t_2 (L);
- t_1 = time corresponding to y_1 ;
- t_2 = time corresponding to y_2 .

All quantities in Eq.(1) are also visually described in Figure 1.

If the water level rises in the screened or open section of the well with a gravel pack around it, the thickness and porosity of the gravel envelope should be taken into account when calculating the equivalent value of r_c for the rising water level. This calculation is based on the total free-water surface area in the well and sand or gravel pack, calculated as (Bouwer and Rice, 1976; Bouwer, 1989).

$$\bar{r}_c = [(1-n) r_c^2 + n r_w^2]^{1/2} \quad (2)$$

where

r_c = equivalent radius of the casing (L);

n = porosity (dimensionless);

r_w = radial distance of undisturbed portion of aquifer from centerline (L).

Assumed porosity value (n) for the sand pack is 0.40 (Freeze and Cherry, 1979, Page 37, Table 2.4). Two points were selected on the straight line portion of the plots and their (t_1, y_1) and (t_2, y_2) coordinates were recorded. Using r_c (or \bar{r}_c) and L_w values for each well from Appendix B, the hydraulic conductivities were calculated from Eq. (1) and are listed in Table 2. The Hvorslev plots and other details are included in Appendix D.

3.2 Bouwer and Rice Method

The Bouwer and Rice Method (Bouwer and Rice, 1976) requires the plotting of the head difference on the vertical scale of semilogarithmic paper versus time on the linear horizontal scale. The graphical details for the method are given in Appendix E. Like the Hvorslev method, the straight line portion of the graphs are used to determine the hydraulic conductivity and for scattered data points, average straight lines were drawn and used in the analysis.

The hydraulic conductivity was calculated for each well data using the following formula (Bouwer and Rice, 1972, Page 424, Eq. (5)):

$$K_h = \frac{r_c^2}{2 L_e} \ln\left(\frac{R_e}{r_w}\right) \frac{1}{t} \ln \left(\frac{y_o}{y_t} \right) \quad (3)$$

where

K_h = horizontal hydraulic conductivity (L/T);

r_c = radius of the casing (L);

L_e = length of screened, perforated, or otherwise

R_e = open section of well (L);
 r_w = effective radial distance over which y is dissipated (L);
 r_w = radial distance of undisturbed portion of aquifer from centerline (L);
 t = time (T);
 y_0 = initial head difference (L);
 y_t = head difference at any time (L).

Eq (2) was used to calculate the modified radius of casing when the water level rises in the screened or open section of the well with a gravel pack around it. Bouwer and Rice (1976) provided a convenient set of curves relating the effective radial distance (R_e) to other known well dimensions. Values of R_e , expressed as $\ln(R_e/r_w)$ were determined for different values of r_w , L_e , and H and the following empirical equations were given (Bouwer and Rice, 1976, Eqs. (8) and (9) for a partially penetrating well ($L_w < H$):

$$\ln \left(\frac{R_e}{r_w} \right) = \left[\frac{1.1}{\ln(L_w/r_w)} + \frac{A+B[\ln(H-L_w)r_w]}{L_e/r_w} \right]^{-1} \quad (4)$$

For a fully penetrating well ($L_w = H$):

$$\ln \left(\frac{R_e}{r_w} \right) = \left[\frac{1.1}{\ln L_w/r_w} + \frac{C}{l_e/r_w} \right]^{-1} \quad (5)$$

Where A, B, and C are dimensionless coefficients that are functions of L_e/r_w as given in Figure 3 of Bouwer and Rice (1976).

Because y_t and t are the only variables in Eq. (3), a plot of $\ln(y_t)$ versus t must show a straight line. Thus, instead of calculating K_h on the basis of two measurements of y_t and t (y_0 at $t = 0$ and y_t at t), a number of y and t measurements can be taken and then $\ln(y_0/y_t)/t$ can be determined as the slope of the best-fitting line through the

y_t versus t points on semilogarithmic paper. The value of y_0 is determined as the intersection point of the log y_t axis and the best-fit line. These values are given in Table 4.

An arbitrary point was selected on the straight line portion of each graph and its (t , y_t) coordinates were determined (see Appendix E). Using the known values of t , y_0 , and y_t , and $1/t \ln(y_0/y_t)$ in Eq. (3) based on the values of L_w and H (Appendix B), the appropriate equation (Eqs. (4) or (5)) was used to calculate $\ln(R_e/r_w)$. Then, the A and B or C coefficients were taken from Figure 3 of Bouwer and Rice (1976). The Bouwer and Rice plots and other details are included in Appendix E. The hydraulic conductivities determined from Eq. (3) are given in Table 5.

4.0 EVALUATION OF THE SLUG TEST RESULTS AND COMPARISON WITH THE PUMPING TEST RESULTS

4.1 Comparison between Hvorslev and Bouwer and Rice Results

The hydraulic conductivity values determined from the Hvorslev method for both rising-head and falling-head cases are given in Table 2. Tables 3 and 4 present the values of parameters needed for the Bouwer and Rice slug test analysis for rising-head and falling-head cases, respectively. Table 5 presents the hydraulic conductivity values determined from the Bouwer and Rice method for both rising-head and falling-head cases. Arithmetic average values were obtained from the four values for each well and are listed in Table 6.

As can be seen from Table 6, the rising-head and falling-head test hydraulic conductivity values for the Hvorslev and Bouwer and Rice method compare reasonably well. It is noted that only two values were used for wells P-1A(TW-1S), P-2A(TW-2S), and P-4A(TW-4S) for the calculation of average values because insufficient data was obtained to compute values by some methods (Table 6). In addition, wells OW-12, OW-17, OW-19A, OW-23, OW-42, P-1A, P-1B, P-2A, P-2B, P-3A, P-3B, P-4A, and P-4B produced scattered data (see Appendices D and E) and average straight lines were drawn through the measured points. The hydraulic conductivity values for these wells compare reasonably well with the rest of the values. Table 7 presents the average hydraulic conductivity value for each well and a description of the aquifer materials in the screen interval.

4.2 Aquifer Comparison between Pumping Test and Slug Test Results

Of the 30 wells that were slug tested, 10 of the wells were used to collect data during the pumping test (Golder Associates, Inc., 1990). These 10 wells include TW-1S, TW-1D, TW-2S, TW-2D, TW-3S, TW-3D, TW-4S, TW-4D, OW-19, and OW-

19A. The pumping test data were analyzed using the Stallman, Neuman, and Hantush methods (Golder Associates Inc., 1990). The values determined for horizontal hydraulic conductivity are presented in Table 8 along with the arithmetic mean values from the slug testing. As can be seen from Table 8 the slug test and pumping test analyses produced significantly comparable horizontal hydraulic conductivity values for wells TW-1S, TW-2S, TW-3S, TW-4S, and OW-19A. However, with the exception of well TW-4D, the remaining values obtained from the pumping test analyses are one order of magnitude to two orders of magnitude higher than the values obtained from the slug tests. The reasons for these discrepancies are explained below.

4.3 Discrepancies between Pumping Test and Slug Test Results

As mentioned above, the slug test hydraulic conductivities for wells P-1B(TW-1D), P-2B(TW-2D), P-3B(TW-3D), P-4B(TW-4D), and OW-19 have significant discrepancies when compared with the pumping test values for these same wells. Table 9 was prepared in order to determine the reasons for the discrepancies. The magnitude of initial head difference (y) relative to the screen length and depth of placement is critically important. The initial hydraulic head difference (y) in Table 9 was calculated by dividing the volume of the PVC slug by the cross-sectional area of the casing. The values of L_b (depth from the static water level to the bottom of the screen interval) and L_m (depth from the static water level to the middle point of the screen interval) are also listed in the Table 9 (refer also to Figure 1). Values of y/L_b and y/L_m , given in Table 9, represent the initial relative hydraulic head difference at the bottom and middle of the test intervals. The wells in Table 9 are ordered according to the magnitude of the initial relative hydraulic head differences.

As can be seen from Table 9, the wells with the slug test results having significant discrepancies from the pumping test values had relatively small initial hydraulic head differences and their screens are placed deep in the aquifer. The dashed zone in Table 9 corresponds to those wells whose slug test hydraulic conductivity values are probably erroneous because these test results violated the assumption of negligible head loss (see Section 3.0).

This evaluation shows that the value of initial hydraulic head difference is important in determining accurate slug test hydraulic conductivity values because a small initial head difference is not as effective in inducing flow into or out of sections with long or deep screens as it is with short, shallow screens. This is probably due to energy losses in the casing and well losses at the screens.

5.0 RESULTS

Based on the analysis presented in Section 4.0, 22 of the hydraulic conductivity values given in Table 9 are considered to be representative average hydraulic conductivity values for the site. As can be seen from Table 9, the hydraulic conductivities ranged from 1.28×10^{-1} cm/sec to 5.48×10^{-4} cm/sec, which is characteristic for the clean to silty sands comprising the aquifer.

Figure 2 presents the spatial variability of hydraulic conductivities across the site. The slug test and pumping test results were used to create this map. The data were extrapolated by taking into account the geological conditions of the site. The pumping test values were used for the wells P-1B(TW-1D), P-2B(TW-2D), P-3B(TW-3D), P-4B(TW-4D), and OW-19 since, as described in Section 4.0, their slug test results are considered erroneous. The slug test values for wells OW-12, OW-18, and OW-30B were also excluded because they are also considered to be erroneous.

The geometric mean value for hydraulic conductivity from the pumping test results (OW-19, OW-19A, and P1-A through P-4B) is 3.65×10^{-2} cm/sec. The geometric mean value for slug test results in the future extraction system area (OW-13, OW-14, OW-17, OW-18A, OW-40, OW-41 and OW-42) is 2.58×10^{-2} cm/sec.

6.0 CONCLUSIONS

The conclusions from this work are as follows:

- o Slug test results for wells with deep and/or long screens do not compare well with pumping test results, probably due to energy losses in the casing and screens.
- o Slug test results for wells with shallow and short screens compare well with pumping test results.
- o The future extraction system area in the vicinity of well OW-18A is hydraulically comparable, in terms of hydraulic conductivity, to the pumping test area. However, the aquifer is thinner in the future extraction well area, than in the pumping test area, which must be considered during extraction system design. The geometric mean hydraulic conductivity values are 3.65×10^{-2} cm/sec for the pumping test area and 2.58×10^{-2} cm/sec for the future extraction system area in the vicinity of well OW-18A. Therefore, the hydraulic conductivity values obtained from the pump test do not have to be adjusted for use in designing the groundwater extraction system.
- o Spatial variabilities of hydraulic conductivity across the site are related to lithologic variations in the aquifer, which must also be considered in the extraction system design. The area of the future extraction system to the east-southeast of OW-18A appears to be a lower hydraulic conductivity area. Geologic units screened by wells in this vicinity are laminated sands or sand with peat compared to the sands and gravels of the OW-18A area and the pumping test

area. Therefore, the hydraulic conductivity values obtained from the pump test should be adjusted to lower values (around 1.0×10^{-2} cm/sec) for use in designing the groundwater extraction system in this area.

REFERENCES

Bouwer, H., 1978, Groundwater Hydrology, McGraw-Hill, Inc.
pp. 114-117.

Bouwer, H., and R.C. Rice, 1976, A Slug Test for Determining
Hydraulic Conductivity of Unconfined Aquifers with
Completely or Partially Penetrating Wells, Water Resources
Research, Vol. 12, pp. 423-428.

Bouwer, H., 1989, The Bouwer and Rice Slug Test - An Update,
Groundwater, Vol. 27, No. 3, pp. 304-309.

Freeze, R.A., and J.A. Cherry, 1979, "Groundwater",
Prentice-Hall, Inc., Englewood Cliffs, New Jersey.

Golder Associates Inc., 1990, Pre-Design Investigation Task
GW-2, Hydrogeologic Characterization for the
Extraction/Recharge System Interim Final Report, Industri-
Plex Site, Woburn, Massachusetts

Hvorslev, 1951, Time Lag and Soil Permeability in
Groundwater Observations, Bull. 36, U.S. Army Corps of
Engineers, Waterways Experiment Station, Vicksburg,
Mississippi.

A:SlugMZ

JANUARY 1991

893-6255

TABLE 1
INDUSTRI-PLEX SITE
WELLS FOR STUDY

WELL NUMBER	LOCATION
OW-11	PLUME AREA
OW-12	PLUME AREA
OW-13	EXTRACTION AREA
OW-14	EXTRACTION AREA
OW-17	EXTRACTION AREA
OW-18	EXTRACTION AREA
OW-18A	EXTRACTION AREA
OW-19	PUMP TEST AREA
OW-19A	PUMP TEST AREA
OW-21	PLUME AREA
OW-23	PLUME AREA
OW-30A	PLUME AREA
OW-30B	PLUME AREA
OW-31	PLUME AREA
OW-32	PLUME AREA
OW-36	PLUME AREA
OW-37	PLUME AREA
OW-38	PLUME AREA
OW-39	PLUME AREA
OW-40	EXTRACTION AREA
OW-41	EXTRACTION AREA
OW-42	EXTRACTION AREA
P-1A(TW-1S)	PUMP TEST AREA
P-1B(TW-1D)	PUMP TEST AREA
P-2A(TW-2S)	PUMP TEST AREA
P-2B(TW-2D)	PUMP TEST AREA
P-3A(TW-3S)	PUMP TEST AREA
P-3B(TW-3D)	PUMP TEST AREA
P-4A(TW-4S)	PUMP TEST AREA
P-4B(TW-4D)	PUMP TEST AREA

TABLE 2
 INDUSTRI-PLEX SITE
 SLUG TEST RESULTS
 HVORSLEV ANALYSIS

WELL NUMBER	K (FALLING HEAD) [CM/SEC]	K (RISING HEAD) [CM/SEC]
OW-11	3.48E-02	2.70E-02
OW-12	2.75E-03	3.38E-03
OW-13	1.53E-02	1.61E-02
OW-14	2.00E-02	2.76E-02
OW-17	1.19E-02	1.01E-02
OW-18	3.27E-03	3.51E-03
OW-18A	1.22E-01	1.96E-01
OW-19	4.02E-03	3.83E-03
OW-19A	4.65E-02	2.84E-02
OW-21	3.40E-03	3.04E-03
OW-23	1.13E-03	1.38E-03
OW-30A	4.04E-02	3.20E-02
OW-30B	2.16E-03	1.63E-03
OW-31	6.49E-03	7.59E-03
OW-32	6.21E-04	7.28E-04
OW-36	2.76E-02	3.43E-02
OW-37	8.24E-04	1.02E-03
OW-38	4.21E-03	1.23E-02
OW-39	1.62E-03	3.09E-03
OW-40	5.56E-02	3.20E-02
OW-41	1.69E-02	2.56E-02
OW-42	2.37E-03	1.72E-03
P-1A (TW-1S)	1.20E-02	2.42E-02
P-1B (TW-1D)	3.20E-03	2.76E-03
P-2A (TW-2S)	4.77E-02	6.52E-03
P-2B (TW-2D)	7.27E-04	1.07E-03
P-3A (TW-3S)	2.27E-02	1.67E-02
P-3B (TW-3D)	1.09E-02	1.02E-02
P-4A (TW-4S)	4.40E-02	NA
P-4B (TW-4D)	5.16E-02	7.15E-02

NA-INSUFFICIENT DATA TO OBTAIN VALUE

BOUWER AND RICE ANALYSIS
RISING HEAD TEST

Well Number	Casing Radius rc (ft)	Well Radius rw (ft)	Le (ft)	H (ft)	Lw (ft)	Le/rw	A	B	C	Yo (ft)	t (sec)	Yt (ft)	Hydraulic Conduct. K (cm/s)
OW-11	0.25 *	0.33	23.05	23.05	23.05	69.15			3.30	1.23	8.00	0.38	1.93E-02
OW-12	0.17	0.33	38.50	42.42	42.42	115.50			4.90	1.58	30.00	0.33	2.13E-03
OW-13	0.17	0.33	18.50	21.22	21.22	55.50			2.90	1.41	8.00	0.42	1.09E-02
OW-14	0.25 *	0.33	30.99	30.99	30.99	92.97			4.00	1.38	10.00	0.21	1.98E-02
OW-17	0.17	0.50	8.50	11.68	11.68	17.00			1.60	1.41	20.00	0.21	1.07E-02
OW-18	0.17	0.50	35.00	40.80	40.80	70.00			3.30	0.66	20.00	0.36	1.24E-03
OW-18A	0.35 *	0.51	7.42	40.42	7.42	14.54	1.60	0.30		0.42	8.00	0.05	1.08E-01
OW-19	0.25	0.51	21.50	54.17	54.17	42.12			2.50	0.83	30.00	0.30	5.09E-03
OW-19A	0.25 *	0.33	36.83	56.83	36.83	110.49	4.60	0.80		0.40	6.00	0.13	1.51E-02
OW-21	0.17	0.50	10.00	28.40	12.62	20.00	2.20	0.30		1.00	40.00	0.40	1.90E-03
OW-23	0.17	0.42	14.00	25.89	15.89	33.60	2.60	0.40		1.41	80.00	0.45	1.01E-03
OW-30A	0.29 *	0.42	8.63	57.91	8.63	20.71	2.20	0.30		1.06	20.00	0.28	1.87E-02
OW-30B	0.17	0.42	12.83	58.58	48.41	30.79	2.50	0.40		0.85	40.00	0.48	1.25E-03
OW-31	0.17	0.42	7.80	30.20	12.90	18.72	2.10	0.30		1.17	20.00	0.50	4.60E-03
OW-32	0.17	0.42	5.00	30.40	6.70	12.00	1.90	0.30		1.48	200.00	0.72	4.61E-04
OW-36	0.29 *	0.42	4.84	4.84	4.84	11.62			1.40	1.15	30.00	0.29	2.18E-02
OW-37	0.17	0.42	13.80	32.57	14.27	33.12	2.60	0.40		1.46	80.00	0.67	6.75E-04
OW-38	0.34 *	0.50	11.29	28.19	11.29	22.58	2.30	0.35		1.26	60.00	0.37	6.23E-03
OW-39	0.29 *	0.42	7.89	20.93	7.89	18.94	2.10	0.30		1.20	100.00	0.76	1.38E-03
OW-40	0.34 *	0.50	4.82	4.82	4.82	9.64			1.25	1.48	20.00	0.74	2.08E-02
OW-41	0.29 *	0.42	11.60	25.05	11.60	27.84	2.40	0.40		1.26	10.00	0.63	1.64E-02
OW-42	0.17	0.50	15.00	32.85	20.54	30.00	2.50	0.45		1.35	30.00	0.78	1.17E-03
P-1A (TW-1S)	0.08	0.25	10.00	61.84	28.99	40.00	2.70	0.45					NA
P-1B (TW-1D)	0.08	0.25	40.00	61.79	57.95	160.00	5.50	0.90		1.18	4.00	0.59	1.71E-03
P-2A (TW-2S)	0.08	0.25	10.00	61.83	27.63	40.00	2.70	0.45					NA
P-2B (TW-2D)	0.08	0.25	40.00	61.80	57.55	160.00	5.50	0.90		1.58	20.00	0.41	6.67E-04
P-3A (TW-3S)	0.08	0.25	10.00	61.75	18.23	40.00	2.70	0.45		0.65	5.00	0.11	9.90E-03
P-3B (TW-3D)	0.08	0.25	10.00	61.82	57.85	40.00	2.70	0.45		1.78	8.00	0.26	7.68E-03
P-4A (TW-4S)	0.08	0.25	10.00	61.73	29.36	40.00	2.70	0.45					NA
P-4B (TW-4D)	0.08	0.25	10.00	61.73	58.85	40.00	2.70	0.45		1.26	1.50	0.08	5.88E-02

* Equivalent casing radius

TABLE 4
BOUWER AND RICE ANALYSIS
FALLING HEAD TEST

Well Number	Casing Radius <i>rc</i> (ft)	Well Radius <i>rw</i> (ft)	<i>Le</i> (ft)	<i>H</i> (ft)	<i>Lw</i> (ft)	<i>Le/rw</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>Yo</i> (ft)	<i>t</i> (sec)	<i>Yf</i> (ft)	Hydraulic Conduct. <i>K</i> (cm/s)
OW-11	0.25 *	0.33	23.05	23.05	23.05	69.15			3.30	0.66	8.00	0.14	2.53E-02
OW-12	0.17	0.33	38.50	42.42	42.42	115.50			4.90	1.50	30.00	0.48	1.55E-03
OW-13	0.17	0.33	18.50	21.22	21.22	55.50			2.90	1.26	8.00	0.33	1.21E-02
OW-14	0.25 *	0.33	30.99	30.99	30.99	92.97			4.00	1.35	10.00	0.35	1.42E-02
OW-17	0.17	0.50	8.50	11.68	11.68	17.00			1.60	1.19	20.00	0.32	7.38E-03
OW-18	0.17	0.50	35.00	40.80	40.80	70.00			3.30	0.93	20.00	0.54	1.11E-03
OW-18A	0.35 *	0.51	7.42	40.42	7.42	14.54	1.60	0.30		0.44	8.00	0.08	8.67E-02
OW-19	0.25	0.51	21.50	54.17	54.17	42.12			2.50	0.80	30.00	0.37	3.86E-03
OW-19A	0.25 *	0.33	36.83	56.83	36.83	110.49	4.60	0.80		0.58	6.00	0.11	2.24E-02
OW-21	0.17	0.50	10.00	28.40	12.62	20.00	2.20	0.30		1.38	40.00	0.48	2.19E-03
OW-23	0.17	0.42	14.00	25.89	15.89	33.60	2.60	0.40		1.41	80.00	0.73	5.80E-04
OW-30A	0.29 *	0.42	8.63	57.91	8.63	20.71	2.20	0.30		1.19	20.00	0.23	2.30E-02
OW-30B	0.17	0.42	12.83	58.58	48.41	30.79	2.50	0.40		1.11	40.00	0.59	1.38E-03
OW-31	0.17	0.42	7.80	30.20	12.90	18.72	2.10	0.30		1.23	20.00	0.48	5.09E-03
OW-32	0.17	0.42	5.00	30.40	6.70	12.00	1.90	0.30		1.58	200.00	0.87	3.82E-04
OW-36	0.29 *	0.42	4.84	4.84	4.84	11.62			1.40	1.15	30.00	0.46	1.45E-02
OW-37	0.17	0.42	13.80	32.57	14.27	33.12	2.60	0.40		1.45	80.00	0.79	5.26E-04
OW-38	0.34 *	0.50	11.29	28.19	11.29	22.58	2.30	0.35		1.26	60.00	0.48	4.91E-03
OW-39	0.29 *	0.42	7.89	20.93	7.89	18.94	2.10	0.30		0.97	100.00	0.67	1.12E-03
OW-40	0.34 *	0.50	4.82	4.82	4.82	9.64			1.25	0.69	20.00	0.12	5.26E-02
OW-41	0.29 *	0.42	11.60	25.05	11.60	27.84	2.40	0.40		0.38	10.00	0.19	1.64E-02
OW-42	0.17	0.50	15.00	32.85	20.54	30.00	2.50	0.45		1.26	30.00	0.47	2.10E-03
P-1A (TW-1S)	0.08	0.25	10.00	61.84	28.99	40.00	2.70	0.45				NA	
P-1B (TW-1D)	0.08	0.25	40.00	61.79	57.95	160.00	5.50	0.90		1.00	4.00	0.54	1.52E-03
P-2A (TW-2S)	0.08	0.25	10.00	61.83	27.63	40.00	2.70	0.45				NA	
P-2B (TW-2D)	0.08	0.25	40.00	61.80	57.55	160.00	5.51	0.90		1.00	20.00	0.22	7.48E-04
P-3A (TW-3S)	0.08	0.25	10.00	61.75	18.23	40.00	2.70	0.45		0.66	5.00	0.04	1.54E-02
P-3B (TW-3D)	0.08	0.25	10.00	61.82	57.85	40.00	2.70	0.45		1.33	8.00	0.22	7.18E-03
P-4A (TW-4S)	0.08	0.25	10.00	61.73	29.36	40.00	2.70	0.45		0.34	1.50	0.04	4.19E-02
P-4B (TW-4D)	0.08	0.25	10.00	61.73	58.85	40.00	2.70	0.45		1.45	1.50	0.27	3.58E-02

* EQUIVALENT CASING RADIUS

TABLE 5
INDUSTRI-PLEX SITE
SLUG TEST RESULTS
BOUWER AND RICE ANALYSIS

WELL NUMBER	K (FALLING HEAD) [CM/SEC]	K (RISING HEAD) [CM/SEC]
OW-11	2.53E-02	1.93E-02
OW-12	1.55E-03	2.13E-03
OW-13	1.21E-02	1.09E-02
OW-14	1.42E-02	1.98E-02
OW-17	7.38E-03	1.07E-02
OW-18	1.11E-03	1.24E-03
OW-18A	8.67E-02	1.08E-01
OW-19	3.86E-03	5.09E-03
OW-19A	2.24E-02	1.51E-02
OW-21	2.19E-03	1.90E-03
OW-23	5.80E-04	1.01E-03
OW-30A	2.30E-02	1.87E-02
OW-30B	1.38E-03	1.25E-03
OW-31	5.09E-03	4.60E-03
OW-32	3.82E-04	4.61E-04
OW-36	1.45E-02	2.18E-02
OW-37	5.26E-04	6.75E-04
OW-38	4.91E-03	6.23E-03
OW-39	1.12E-03	1.38E-03
OW-40	5.26E-02	2.08E-02
OW-41	1.64E-02	1.64E-02
OW-42	2.10E-03	1.17E-03
P-1A (TW-1S)	NA	NA
P-1B (TW-1D)	1.52E-03	1.71E-03
P-2A (TW-2S)	NA	NA
P-2B (TW-2D)	7.48E-04	6.67E-04
P-3A (TW-3S)	1.54E-02	9.90E-03
P-3B (TW-3D)	7.18E-03	7.68E-03
P-4A (TW-4S)	4.19E-02	NA
P-4B (TW-4D)	3.58E-02	5.88E-02

NA - INSUFFICIENT DATA TO OBTAIN VALUE

TABLE 6
COMPARISON OF SLUG TEST VALUES

WELL NUMBER	SLUG TEST RESULTS HVORSLEV ANALYSIS		SLUG TEST RESULTS BOUWER AND RICE ANALYSIS		K AVERAGE [CM/SEC]
	K (FALLING HEAD) [CM/SEC]	K (RISING HEAD) [CM/SEC]	K (FALLING HEAD) [CM/SEC]	K (RISING HEAD) [CM/SEC]	
OW-11	3.48E-02	2.70E-02	2.53E-02	1.93E-02	2.66E-02
OW-12	2.75E-03	3.38E-03	1.55E-03	2.13E-03	2.45E-03
OW-13	1.53E-02	1.61E-02	1.21E-02	1.09E-02	1.36E-02
OW-14	2.00E-02	2.76E-02	1.42E-02	1.98E-02	2.04E-02
OW-17	1.19E-02	1.01E-02	7.38E-03	1.07E-02	1.00E-02
OW-18	3.27E-03	3.51E-03	1.11E-03	1.24E-03	2.28E-03
OW-18A	1.22E-01	1.96E-01	8.67E-02	1.08E-01	1.28E-01
OW-19	4.02E-03	3.83E-03	3.86E-03	5.09E-03	4.20E-03
OW-19A	4.65E-02	2.84E-02	2.24E-02	1.51E-02	2.81E-02
OW-21	3.40E-03	3.04E-03	2.19E-03	1.90E-03	2.63E-03
OW-23	1.13E-03	1.38E-03	5.80E-04	1.01E-03	1.02E-03
OW-30A	4.04E-02	3.20E-02	2.30E-02	1.87E-02	2.85E-02
OW-30B	2.16E-03	1.63E-03	1.38E-03	1.25E-03	1.61E-03
OW-31	6.49E-03	7.59E-03	5.09E-03	4.60E-03	5.94E-03
OW-32	6.21E-04	7.28E-04	3.82E-04	4.61E-04	5.48E-04
OW-36	2.76E-02	3.43E-02	1.45E-02	2.18E-02	2.46E-02
OW-37	8.24E-04	1.02E-03	5.26E-04	6.75E-04	7.61E-04
OW-38	4.21E-03	1.23E-02	4.91E-03	6.23E-03	6.91E-03
OW-39	1.62E-03	3.09E-03	1.12E-03	1.38E-03	1.80E-03
OW-40	5.56E-02	3.20E-02	5.26E-02	2.08E-02	4.03E-02
OW-41	1.69E-02	2.56E-02	1.64E-02	1.64E-02	1.88E-02
OW-42	2.37E-03	1.72E-03	2.10E-03	1.17E-03	1.84E-03
P-1A (TW-1S)	1.20E-02	2.42E-02	NA	NA	1.81E-02
P-1B (TW-1D)	3.20E-03	2.76E-03	1.52E-03	1.71E-03	2.30E-03
P-2A (TW-2S)	4.77E-02	6.52E-03	NA	NA	2.71E-02
P-2B (TW-2D)	7.27E-04	1.07E-03	7.48E-04	6.67E-04	8.03E-04
P-3A (TW-3S)	2.27E-02	1.67E-02	1.54E-02	9.90E-03	1.62E-02
P-3B (TW-3D)	1.09E-02	1.02E-02	7.18E-03	7.68E-03	8.99E-03
P-4A (TW-4S)	4.40E-02	NA	4.19E-02	NA	4.30E-02
P-4B (TW-4D)	5.16E-02	7.15E-02	3.58E-02	5.88E-02	5.44E-02

NA-INSUFFICIENT DATA TO COMPUTE VALUE

TABLE 7
FORMATION AT SCREENED INTERVAL

WELL NUMBER	AVERAGE HYDRAULIC CONDUCTIVITY VALUE (CM/SEC)		L _e (TEST INTERVAL) (FT)	L _w	FORMATION AT SCREEN
	SLUG TEST*	PUMPING TEST**			
OW-11	2.66E-02	NA	23.05(FP)	23.05	Alternating layers of fine sand(sorted) and fine gravel.
OW-112	2.45E-03	NA	38.5(FP)	42.42	Very fine to fine sand; alternating layers of fine sand(sorted) and coarse sand.
OW-13	1.36E-02	NA	18.5(FP)	21.22	Fine sand(sorted); pebble gravel and coarse sand, granules and pebbles.
OW-14	2.04E-02	NA	30.99(FP)	30.99	Coarse sand and granules(sorted).
OW-17	1.00E-02	NA	8.5(FP)	11.68	Coarse sand, pebbles to small cobbles.
OW-18	2.28E-03	NA	35(FP)	40.80	Micaceous silt; fine sand and fine gravel in sandy and silt matrix with trace of clay
OW-18A	1.28E-01	NA	7.42(SH)	7.42	Coarse gravel with silt and fine sand; fill.
OW-19	4.20E-03	5.88E-02	21.5(FP)	54.17	Graded fine to medium sand(abundant mica); silty fine to medium sand.
OW-19A	2.81E-03	2.49E-02	36.83(SH)	36.83	Medium to coarse sand(sorted); graded fine to medium sand(abundant mica).
OW-21	2.63E-03	NA	10.00(SH)	12.62	Course to fine sand (fining downward).
OW-23	1.02E-03	NA	14.00(SH)	15.89	Fine to medium sand; peat with trace of gravel.
OW-30A	2.85E-02	NA	8.63(SH)	8.63	Medium to coarse sand; gravel.
OW-30B	1.61E-03	NA	12.83(SH)	48.41	Fine to medium sand(laminated).
OW-31	5.94E-03	NA	7.80(SH)	12.90	Medium to fine sand, little silt.
OW-32	5.48E-04	NA	5.00(SH)	6.70	Medium to fine sand with trace fine gravel; silt
OW-36	2.46E-02	NA	4.84(FP)	4.84	Medium to fine sand, well sorted, fining downward.
OW-37	7.61E-04	NA	13.80(SH)	14.27	Medium to fine sand, well sorted, some angular gravel.
OW-38	6.91E-03	NA	11.29(SH)	11.29	Fine to medium sand, little fine gravel.
OW-39	1.80E-03	NA	7.89(SH)	7.89	Fine to medium sand with some silt.
OW-40	4.03E-02	NA	4.82(FP)	4.82	Medium to fine sand, iron stained, laminated, well sorted.
OW-41	1.88E-02	NA	11.60(SH)	11.60	Fine sand with little coarse gravel.
OW-42	1.84E-03	NA	15.00(SH)	20.54	Fine sand, laminated.
P-1A(TW-1S)	1.81E-02	2.63E-02	10.00(SH)	28.99	Medium to coarse sand, fine to coarse gravel; poorly sorted.
P-1B(TW-1D)	2.30E-03	9.17E-03	40.00(SH)	57.95	Fine to coarse gravel and fine to coarse sand interbedded with some silt; tight.
P-2A(TW-2S)	2.71E-02	2.38E-02	10.00(SH)	27.63	No log, assumed to be similar to P-1A.
P-2B(TW-2D)	8.03E-04	9.61E-02	40.00(SH)	57.55	No log, assumed to be similar to P-3B.
P-3A(TW-3S)	1.62E-02	1.31E-02	10.00(SH)	18.23	Fine to Medium sand.
P-3B(TW-3D)	8.99E-03	7.90E-02	10.00(SH)	57.85	Fine to medium sand some coarse gravel.
P-4A(TW-4S)	4.30E-02	4.65E-02	10.00(SH)	29.36	Coarse sand and coarse gravel.
P-4B(TW-4D)	5.44E-02	10.70E-02	10.00(SH)	58.85	Coarse sand and coarse gravel.

*Value taken from Table 5

FP=Fully penetrating well

**Value taken from Table 6

SH=Shallow well

NA=Well not used in pump test.

TABLE 8
COMPARISON OF SLUG AND PUMPING TEST
HORIZONTAL HYDRAULIC CONDUCTIVITY VALUES

WELL NUMBER	SLUG TESTS AVERAGE K VALUES (CM/SEC)	PUMPING TEST DATA				
		HORIZONTAL HYDRAULIC CONDUCTIVITY GPD/FT ²			AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY	
		STALLMAN METHOD	NEUMAN METHOD	HANTUSH METHOD	GPD/FT ²	(CM/SEC)
P-1A(TW-1S)	1.81E-2	618	497	(a)	558	2.63E-2
P-1B(TW-1D)	2.30E-3	2272	1595	1967	1945	9.17E-2
P-2A(TW-2S)	2.71E-2	600	410	(a)	505	2.38E-2
P-2B(TW-2D)	8.03E-4	2335	1750	2027	2037	9.61E-2
P-3A(TW-3S)	1.62E-2	280	276	(a)	278	1.31E-2
P-3B(TW-3D)	8.99E-3	1827	1392	1808	1676	7.90E-2
P-4A(TW-4S)	4.30E-2	1078	895	(a)	987	4.65E-2
P-4B(TW-4D)	5.44E-2	3002	2112	1672	2262	10.7E-2
OW-19	4.20E-3	(b)	1436	1057	1247	5.88E-2
OW-19A	2.81E-2	(b)	529	(a)	529	2.49E-2

(a) No unique fit of time versus drawdown for this particular temporary well configuration.

(b) Existing well construction design is not applicable to the Stallman method.

TABLE 9
SLUG TEST HYDRAULIC CONDUCTIVITY VALUES SORTED ON THE RATIO y/L_m
(REFER TO FIGURE 1 FOR NOTATION)

Well Number	Depth to Water (ft BGS)	Test Length (ft)	Depth from Water Level to Bottom of Test Interval (lb)	Mid-Point of Test Interval (ft)	Hydraulic Head Difference (y)	% Hydraulic Head Difference Relative to Bottom of Interval ($y/L_b \times 100$)	% Hydraulic Head Difference Relative to Mid Point of Interval ($y/L_m \times 100$)	Average Slug Test Hydraulic Conductivity (cm/s)
OW-19	6.83	21.50	54.17	43.42	0.56	1.03	1.29	4.20E-03
OW-18	8.70	35.00	40.80	23.30	0.56	1.37	2.40	2.28E-03
P-4B (TW-4D)	4.65	10.00	58.85	53.85	1.35	2.29	2.51	5.44E-02
P-3B (TW-3D)	4.66	10.00	57.85	52.85	1.35	2.33	2.55	8.99E-03
OW-30B	11.92	12.83	48.41	42.00	1.23	2.54	2.93	1.61E-03
P-1B (TW-1D)	4.65	40.00	57.95	37.95	1.35	2.33	3.56	2.30E-03
P-2B (TW-2D)	5.05	40.00	57.55	37.55	1.35	2.35	3.60	8.03E-04
OW-12	7.08	38.50	42.42	23.17	1.23	2.90	5.31	2.45E-03
P-4A (TW-4S)	4.53	10.00	29.36	24.36	1.35	4.60	5.54	4.30E-02
P-1A (TW-1S)	4.75	10.00	28.99	23.99	1.35	4.66	5.63	1.81E-02
P-2A (TW-2S)	4.88	10.00	27.63	22.63	1.35	4.89	5.97	2.71E-02
OW-19A	4.17	36.83	36.83	18.42	1.23	3.34	6.68	2.81E-02
OW-14	7.01	30.99	30.99	15.50	1.23	3.97	7.94	2.04E-02
OW-42	16.96	15.00	20.54	13.04	1.23	5.99	9.43	1.84E-03
P-3A (TW-3S)	4.59	10.00	18.23	13.23	1.35	7.41	10.20	1.62E-02
OW-13	4.28	18.50	21.22	11.97	1.23	5.80	10.28	1.36E-02
OW-11	3.95	23.05	23.05	11.53	1.23	5.34	10.67	2.66E-02
OW-31	4.18	7.80	12.90	9.00	1.23	9.53	13.67	5.94E-03
OW-23	14.11	14.00	15.89	8.89	1.23	7.74	13.84	1.02E-03
OW-21	4.88	10.00	12.62	7.62	1.23	9.75	16.14	2.63E-03
OW-17	5.82	8.50	11.68	7.43	1.23	10.53	16.55	1.00E-02
OW-37	5.03	13.80	14.27	7.37	1.23	8.62	16.69	7.61E-04
OW-41	6.90	11.60	11.60	5.80	1.23	10.60	21.21	1.88E-02
OW-38	6.21	11.29	11.29	5.65	1.23	10.89	21.79	6.91E-03
OW-30A	12.09	8.63	8.63	4.32	1.23	14.25	28.51	2.85E-02
OW-32	4.70	5.00	6.70	4.20	1.23	18.36	29.29	5.48E-04
OW-39	9.21	7.89	7.89	3.95	1.23	15.59	31.18	1.80E-03
OW-18A	8.08	7.42	7.42	3.71	1.23	16.58	33.15	1.28E-01
OW-36	5.02	4.84	4.84	2.42	1.23	25.41	50.83	2.46E-02
OW-40	11.82	4.82	4.82	2.41	1.23	25.52	51.04	4.03E-02

██████████ SLUG TESTS WITH ERRONEOUS RESULTS DUE TO THE SMALL CHANGE IN HYDRAULIC HEAD

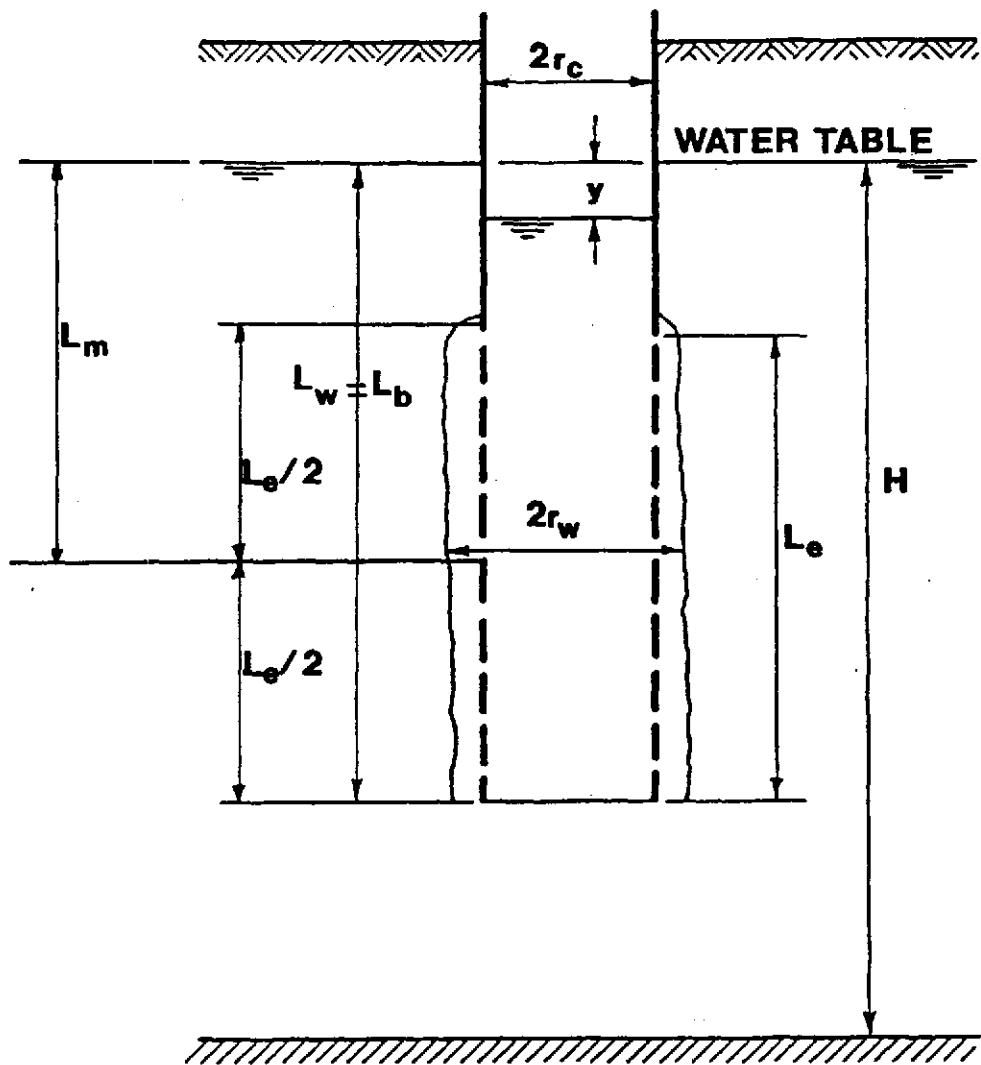
RELATIVE TO THE INITIAL HYDRAULIC HEAD AT THE MID POINT OF THE TEST INTERVAL

██████████ SLUG TESTS WITH POSSIBLE ERRONEOUS RESULTS DUE TO THE SMALL CHANGE IN HYDRAULIC HEAD

RELATIVE TO THE INITIAL HYDRAULIC HEAD AT THE MID POINT OF THE TEST INTERVAL

██████████ VALID SLUG TEST RESULTS

Golder Associates



IMPERMEABLE

Fig. 1. Geometry and symbols for slug test on partially penetrating, partially screened well in unconfined aquifer with gravel pack and/or developed zone around screen.

JOB No.:	893-6255	SCALE:	N/A
DRAWN:	MRM	DATE:	12/04/90
CHECKED:	VB	DWG. No.:	MA01-268

**GRAPHICAL REPRESENTATION
OF VARIABLE HEAD TEST
PARAMETERS**



LEGEND

OW-19 *
TW-1D *

WELL/PIEZOMETER LOCATION WITH AVERAGE HYDRAULIC CONDUCTIVITY FROM ANALYSIS OF PUMPING TEST DATA

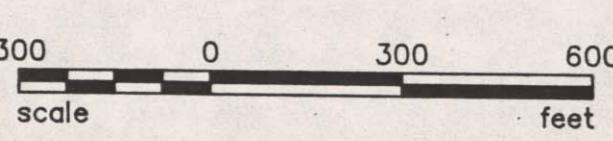
OW-14

WELL LOCATION WITH AVERAGE HYDRAULIC CONDUCTIVITY FROM ANALYSIS OF RISING AND FALLING HEAD TESTS DATA

1 E-3 ————— INTERPRETED CONTOUR OF EQUAL HYDRAULIC CONDUCTIVITY (CM/S)

NOTES

1.) HYDRAULIC CONDUCTIVITY BASED ON STUDY TEST DATA



REV	DATE	DESCRIPTION	DR BY	RVW BY
SCALE: AS SHOWN		PROJECT: INDUSTRI-PLEX SITE REMEDIAL TRUST WOBURN, MASSACHUSETTS		
PROJECT No. 893-6255			INTERPRETED DISTRIBUTION OF THE HYDRAULIC CONDUCTIVITY	
DES BY	MJ	12/13/90		
DR BY	MRM	12/14/90		
CHK BY	FG	1/16/91		
RVW BY	VB	1/29/91		

The logo consists of a thick black circle containing a stylized letter 'A'. The 'A' has a vertical stem on the left and two diagonal strokes forming an 'A' shape. To the right of the logo, the company name "Golder Associates" is written in a bold, sans-serif font. Below the company name, the location "Mt. Laurel, New Jersey" is written in a smaller, regular sans-serif font.

DRAWING No. MA01-272

FIGURE 2

Appendix A
Slug Test Procedure

GOLDER ASSOCIATES
TECHNICAL PROCEDURE FOR CONDUCTING RISING HEAD SLUG TEST

1.0 PURPOSE

This Technical Procedure is to be used to establish a uniform procedure for executing a rising head slug test

2.0 APPLICABILITY

This Technical Procedure is applicable to all persons or parties involved with rising head slug testing.

3.0 DEFINITIONS

3.1 Rising Head Slug Test: A controlled field experiment conducted in a single borehole to determine the hydraulic properties of water bearing strata. The test is initiated by causing an instantaneous change in the water level in a piezometer or well through a sudden removal of a known volume of water. The recovery of the water level with time is then observed.

3.2 Measuring Point: A permanent point to which water level measurements are referenced. Top of the borehole casing is commonly utilized as a measuring point.

3.3 Drawdown: Change in water level from static condition.

4.0 REFERENCES

Bouwer, H., 1978, Groundwater Hydrology, McGraw-Hill, Inc., pp. 114-117.

Bouwer, H., and R. C. Rice, 1976, A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells, Water Resources Research, Vol. 12, pp. 423-428.

Bouwer, H., 1989, The Bouwer and Rice Slug Test - An Update, Groundwater, Vol. 27, No. 3, pp. 304-309.

Hvorslev, 1951, Time Lag and Soil Permeability in Groundwater Observations, Bull. 36, U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS.

5.0 DISCUSSION

The rising head slug test is based upon the following assumptions (Hvorslev, 1951):

- o Water is removed from the piezometer instantaneously,
- o Darcy's law is valid,
- o The medium is homogeneous and isotropic,

- o Both soil and water are incompressible,
- o The medium extends to infinity in all directions,
- o The position of the water table (equilibrium water level) does not change with time.

6.0 RESPONSIBILITY

Each person performing a rising head slug test shall be responsible for proceeding with testing in compliance with this technical procedure.

7.0 EQUIPMENT AND MATERIALS

- 7.1 Field book for recording notes and time.
- 7.2 Water level sounder accurate to a minimum of 0.03 ft.
- 7.3 Watch.
- 7.4 Folding rule or spring-wound tape measure, graduated in 0.01 foot increments.
- 7.5 A pump, bailer, or slug of suitable design to evacuate or displace the water from the well bore rapidly.
- 7.6 Hoses of sufficient length and annular rigidity to convey water under expected pressures (if pump is used).
- 7.7 A datalogger, preferably a portable model which can be carried in one hand, and which is water resistant.
- 7.8 A pressure transducer, either vibrating wire or strain gauge type. Pressure range (i.e., psi rating) should be appropriate for the situation. If deep wells are to be tested, and a great deal of water is to be displaced, it will be necessary to place the transducer under several feet of water, and a higher rated pressure will be required than for shallow wells. Lower pressure ratings usually have increased sensitivity, so it is important to select a model that is optimal for the situation.
- 7.9 A portable computer capable of operating from a battery is necessary, as is appropriate software for the datalogger employed.

8.0 PROCEDURE

- 8.1 Record date, well, and job information for a given test in field book.

- 8.2 Making sure that the transducer has been properly decontaminated, place transducer to the appropriate depth in the well or hole to be tested, making sure to note the serial number of the transducer, and the depth below the defined measuring point to which it has been placed. Fasten the transducer cable to the well riser or protective casing so that the transducer will not change position during testing. The depth selected for the transducer should take into account the desired/anticipated drop in water level, the placement of the pump (if one is used) or the depth to which a slug or bailer will be lowered. The transducer should be placed deep enough to avoid contact with bailers, slugs or pump parts.
- 8.3 Depending upon the type of transducer, datalogger, and software used, it may be necessary to calibrate the transducer prior to beginning testing. The manufacturers instructions should be followed for the particular model used. In most cases, the depth to water is measured with the water level sounder, and the depth of the transducer below the measuring point must also be known. For models which do not need special calibration, the water level should be taken relative to the measuring point and recorded, as should the depth of the transducer, before each test. In this way, the accuracy of the transducer may be established.
- 8.4 Most dataloggers have an option for varying the data collection rate of the transducer. This rate should be set to some convenient and useful rate initially, so that the stabilization of the water level within the well following the introduction of the transducer may be monitored. In general, a sampling rate of about 1 minute is usually adequate for this purpose. The computer should be connected to the datalogger by way of a data interface cable, and the transducer readings should be monitored in real time.
- 8.5 The water level within the well or hole to be tested should be monitored for at least 1/4 of the anticipated test duration to determine static water level or water level trends. If the approximate test time cannot be anticipated, water levels should be monitored with the computer and datalogger until changes have stabilized to less than 3%, or until a consistent trend has been established.

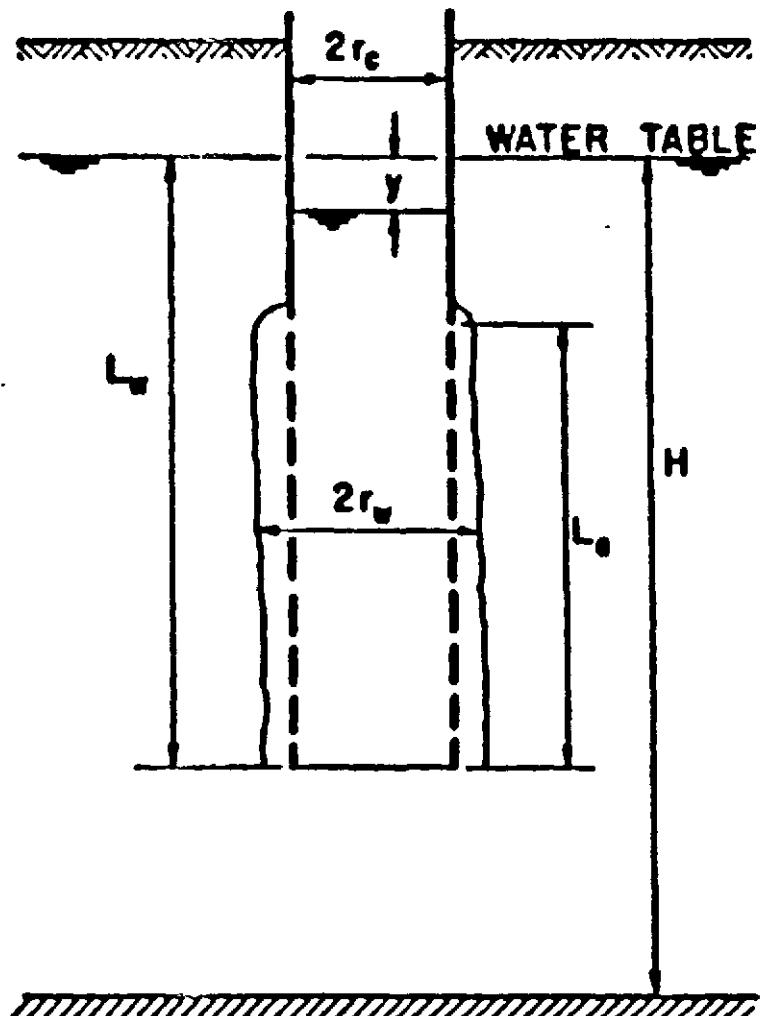
- 8.6 Set a beginning of test "flag" by unplugging the transducer for 1 reading so that a null reading will appear in the downloaded data file which will aid in finding breaks between different tests. The time that this null reading is taken should be noted in the field book for the appropriate test. Change sampling rate so that it is rapid enough to record an adequate number of readings before the well is fully recovered. For very high permeability material 1 or 2 seconds may be appropriate if the well is anticipated to recover in just a few minutes. Longer sampling rates may be used for less permeable materials.
- 8.7 If using a pump, start pump and operate at full throttle. When water level reaches suction intake, remove suction line from well and shut off pump.
- 8.8 If using a bailer, rapidly remove bailer from hole.
- 8.9 If using a slug, introduce slug rapidly down the well or hole on a secure rope or cable. The action of displacing water in this way is suitable for analysis as a falling head test. As the well nears recovery, reduce sampling rate as appropriate, while monitoring well recovery with the computer in real time. After water level has returned to previous static conditions, set another "flag", again noting time in field book, shorten sampling rate time again, and rapidly withdraw slug from well. These data are suitable for analysis as a rising head test. Again, lengthen sampling rate as well nears full recovery.
- 8.10 Test data should be downloaded from datalogger and backed up on a disk after each test. Data may be checked by using a spreadsheet software program with graphical capabilities, such as Lotus 1-2-3.
- 8.11 If the material being tested is of relatively low permeability, and recovery times are long, monitor until recovery has reached 70% of static (Hvorslev, 1951), or until data plot with reasonable linearity (Bouwer, 1978). Repeat test if necessary.
- 8.12 Calculate geometric factors necessary for data analysis and record on Exhibit A, "Geometric Factors for Rising Head Slug Test Analysis".

8.13 Perform data analysis as described by Hvorslev (1951), Bouwer (1978, 1989), Bouwer and Rice (1976), or other method as deemed appropriate.

Job No. _____
Job Name _____
By _____
Date _____

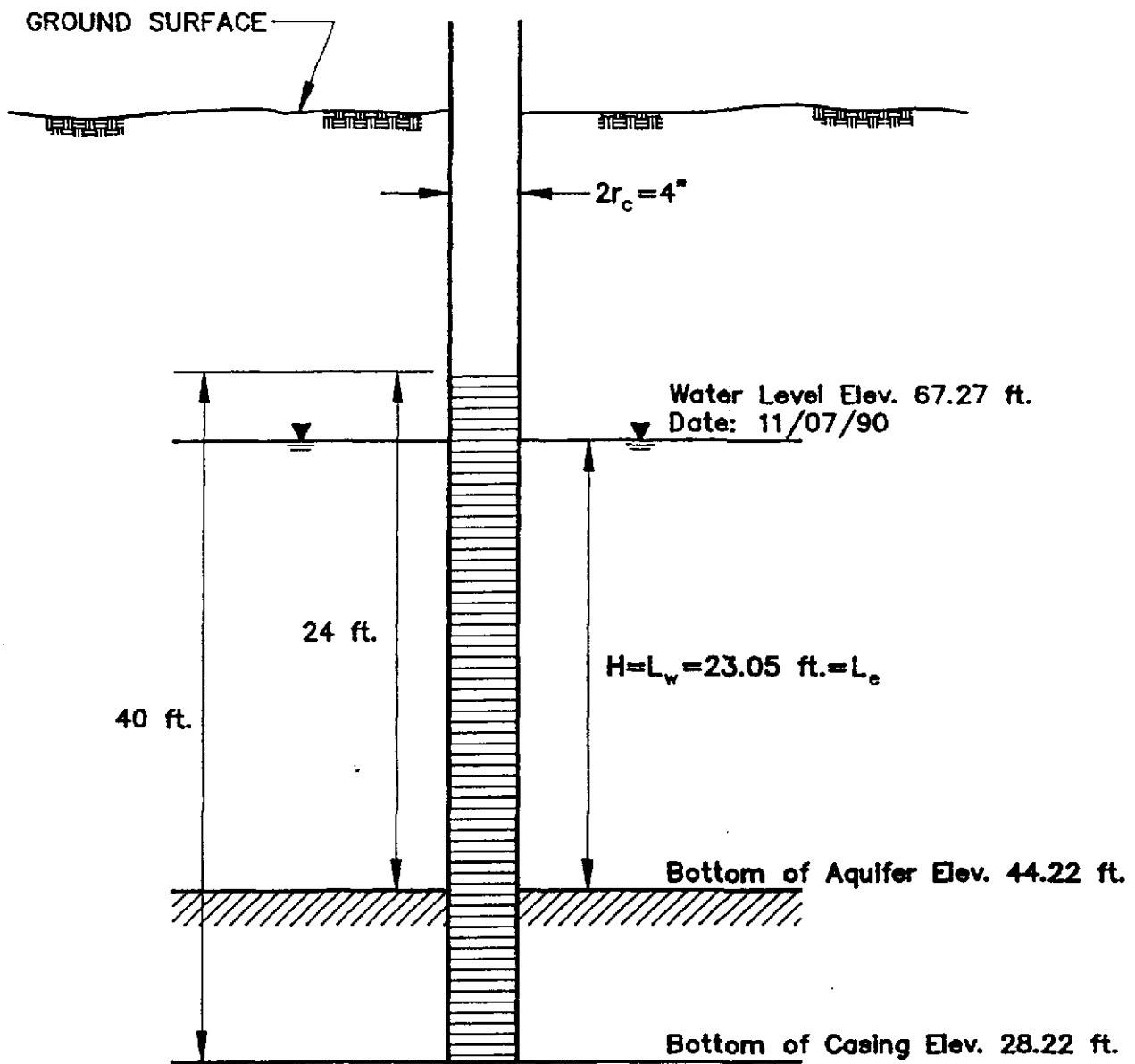
EXHIBIT A
GEOMETRIC FACTORS FOR RISING HEAD SLUG TEST ANALYSIS

Well Identification _____



(See Bouwer, 1978, for explanation of symbols)

Appendix B
Well Dimensions



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

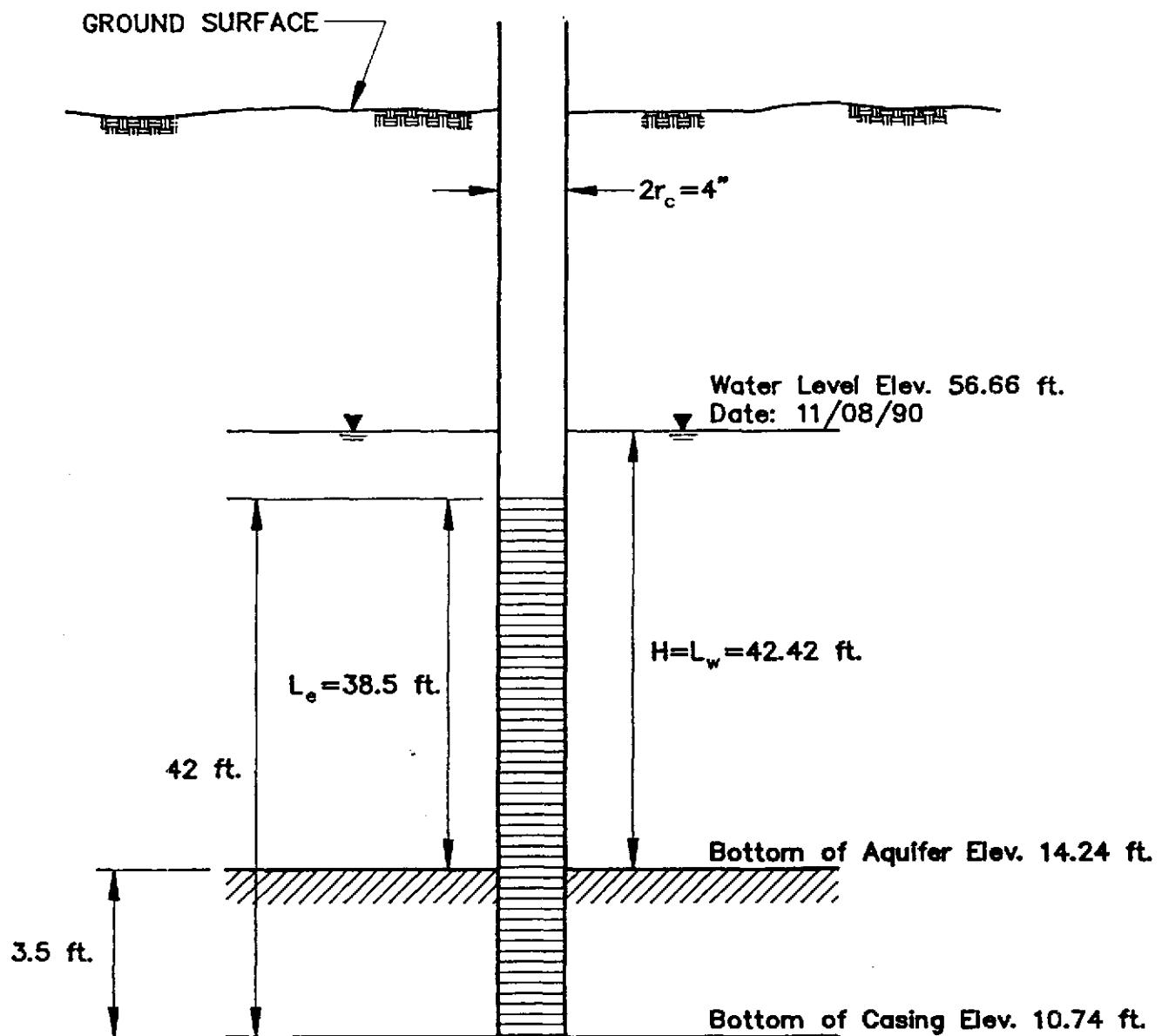
JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/06/90
CHECKED:	VB	DWG. No.:	MA01-238

Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

WELL No. OW-11
SLUG TEST ANALYSIS

FIGURE B1

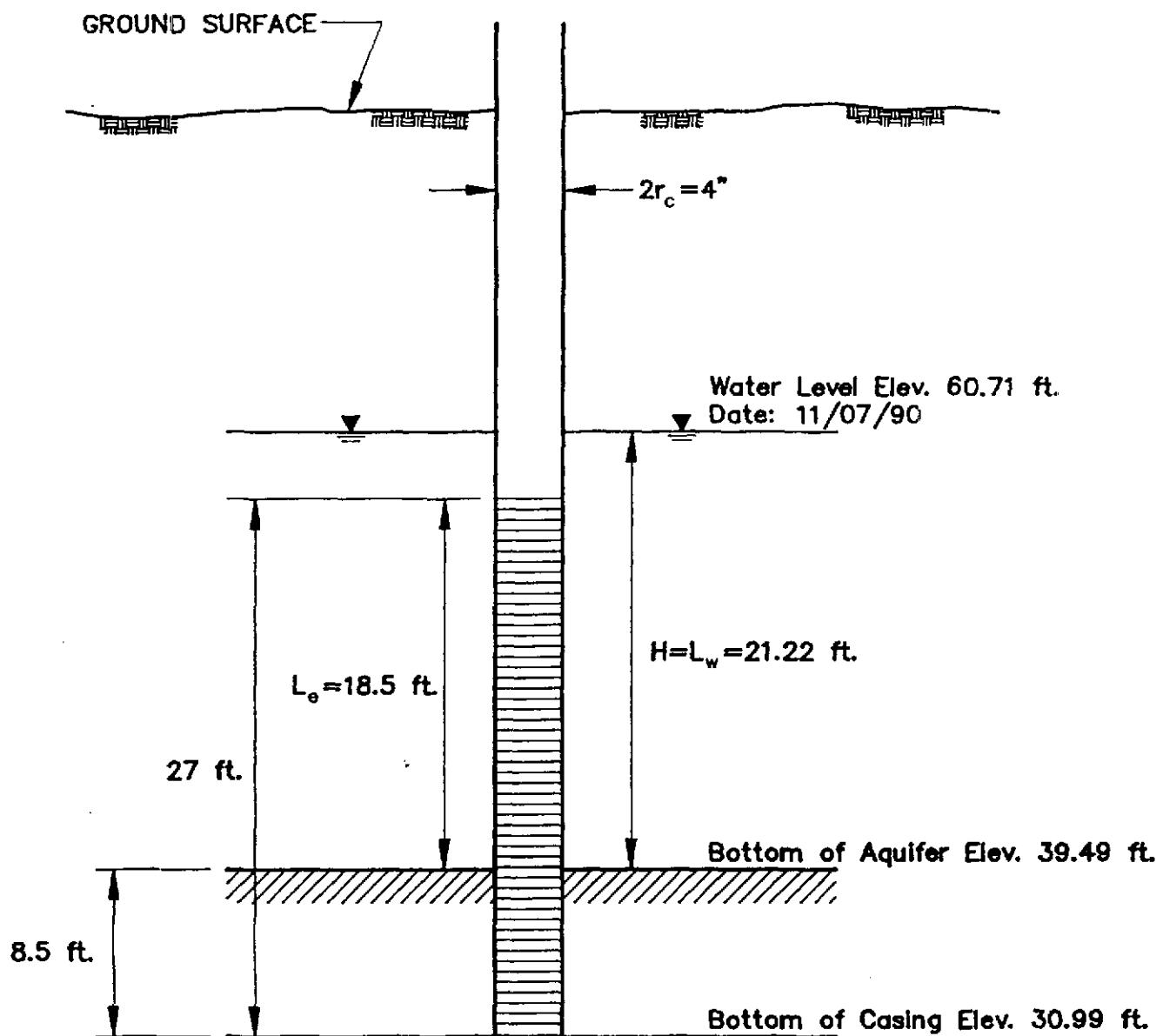


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/06/90
CHECKED:	VB	DWG. No.:	MA01-239

WELL No. OW-12
SLUG TEST ANALYSIS

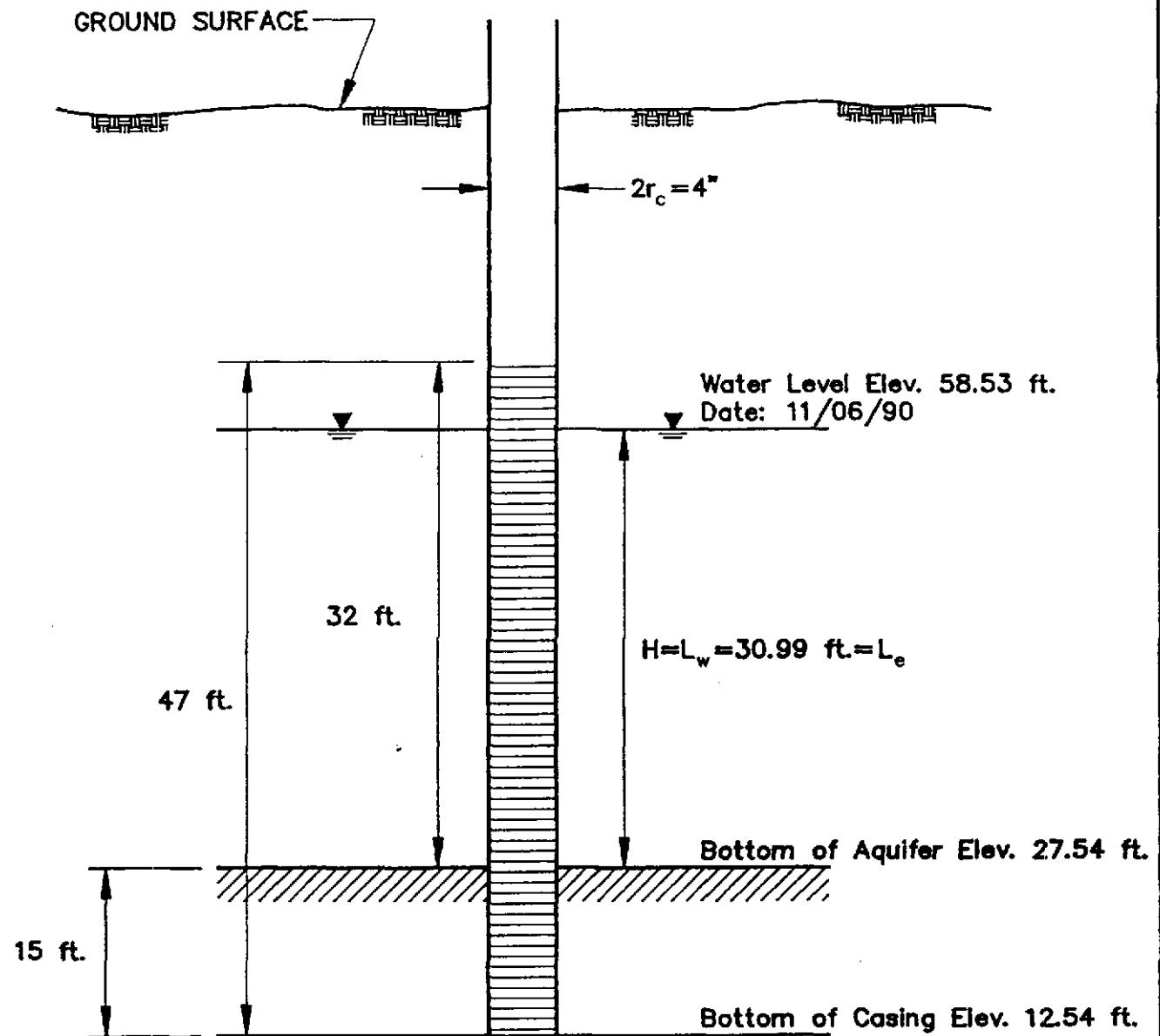


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/06/90
CHECKED:	VB	DWG. No.:	MA01-240

WELL No. OW-13
SLUG TEST ANALYSIS

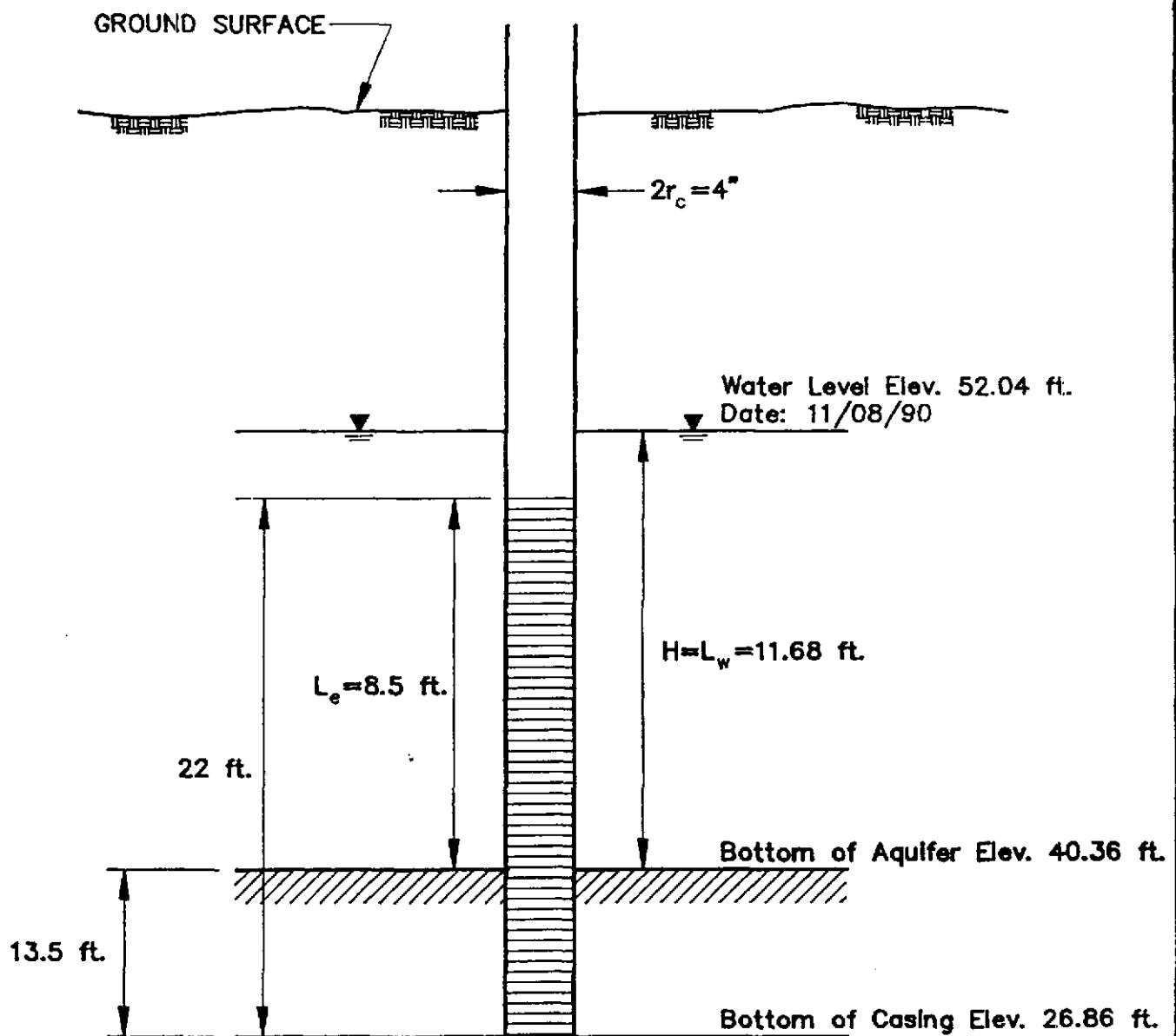


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/06/90
CHECKED:	VB	DWG. No.:	MA01-241

WELL No. OW-14
SLUG TEST ANALYSIS

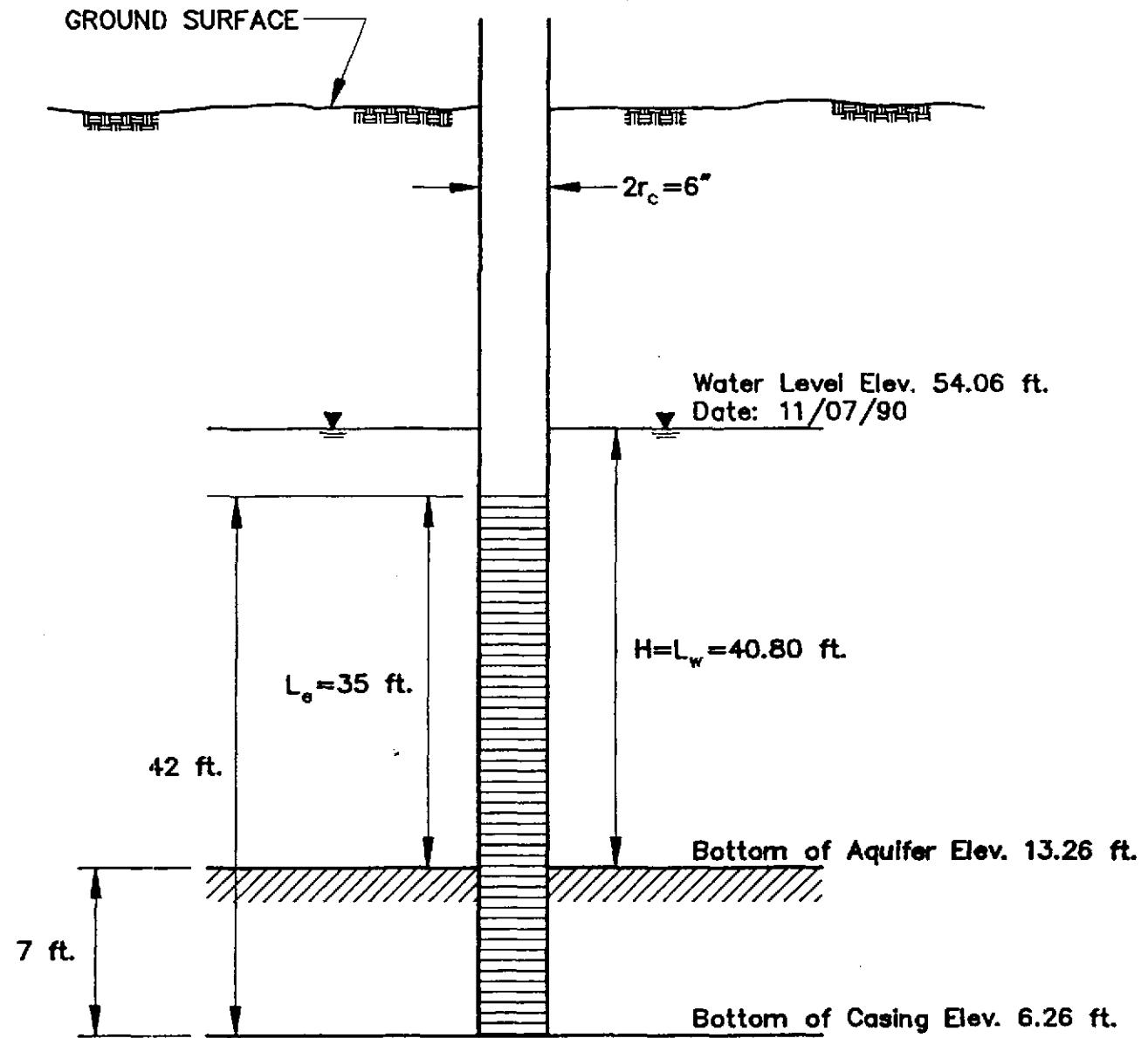


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/06/90
CHECKED:	VB	DWG. No.:	MA01-242

WELL No. OW-17
SLUG TEST ANALYSIS

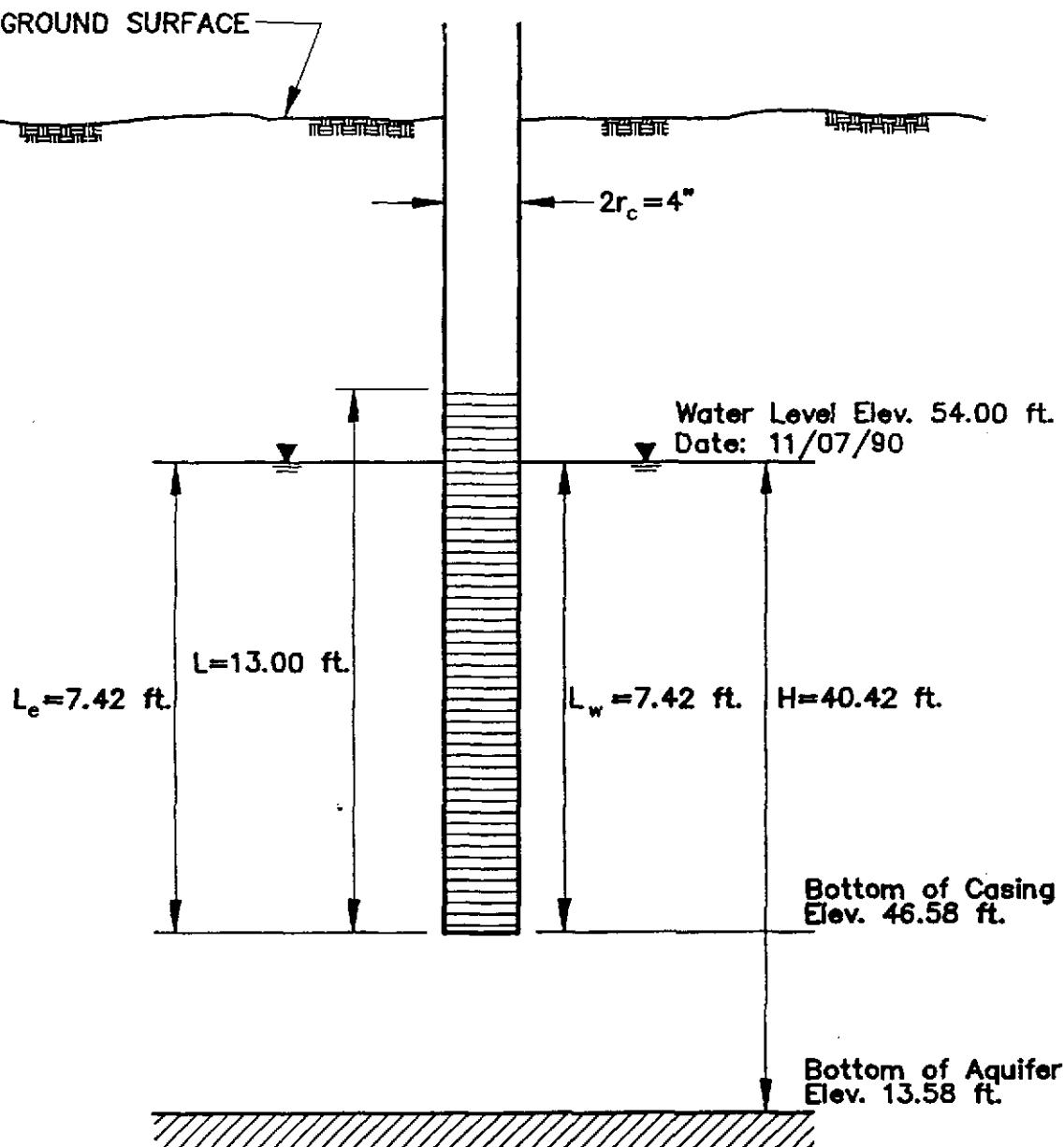


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/06/90
CHECKED:	VB	DWG. No.:	MA01-243

**WELL No. OW-18
SLUG TEST ANALYSIS**



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-244

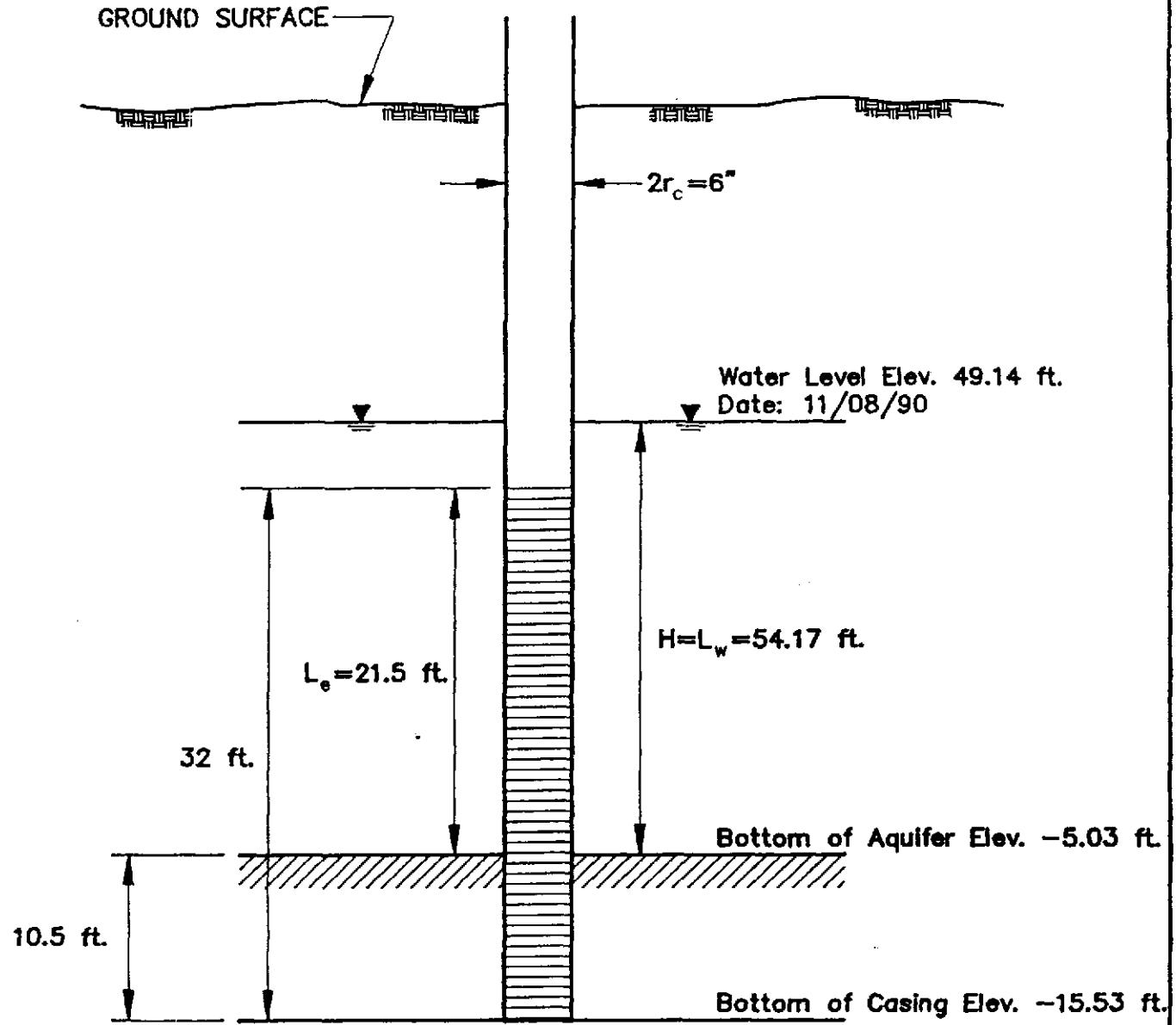
Golder Associates

WELL No. OW-18A
SLUG TEST ANALYSIS

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE

B7

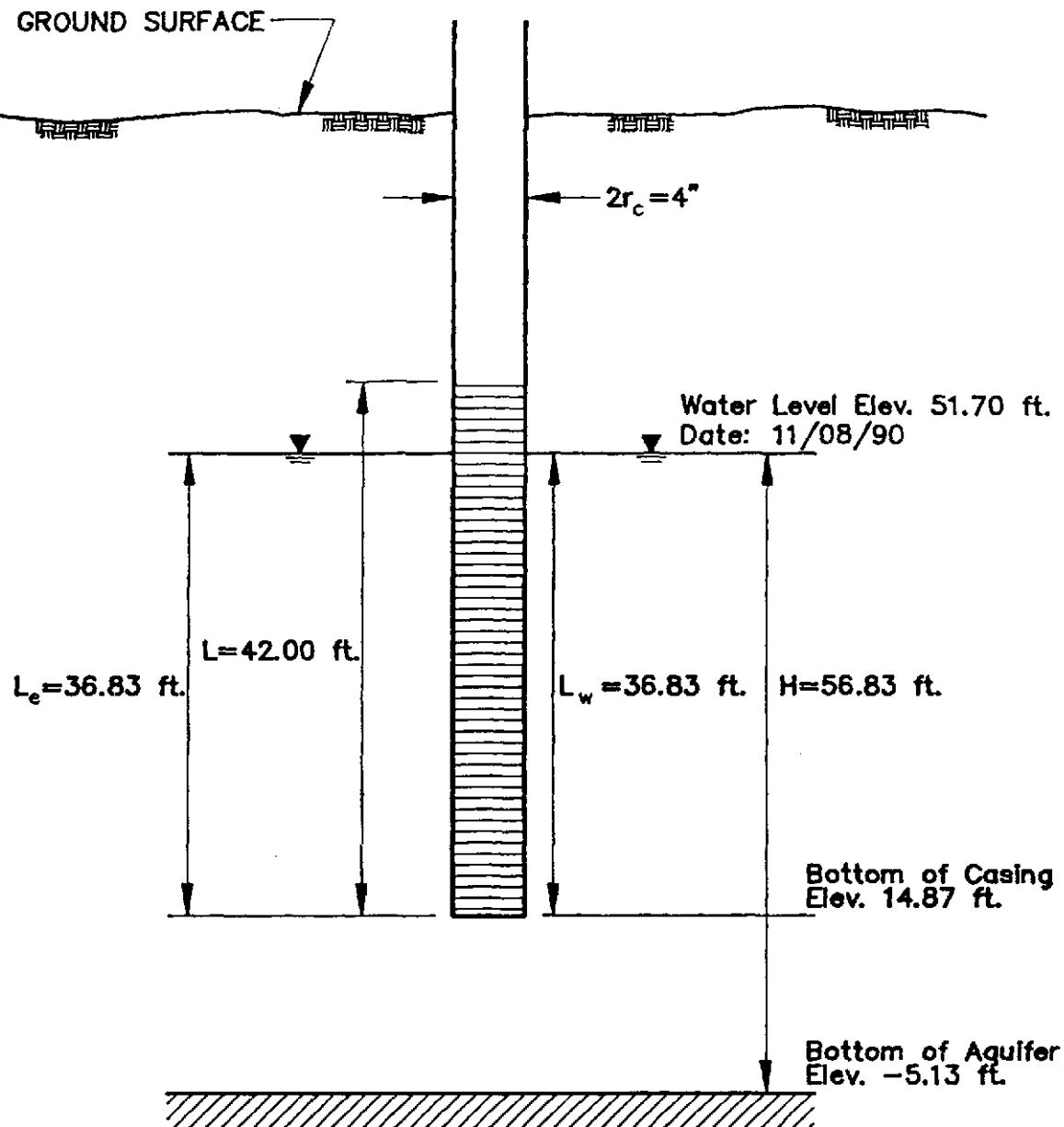


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-245

WELL No. OW-19
SLUG TEST ANALYSIS



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-246

**WELL No. OW-19A
SLUG TEST ANALYSIS**

$L_e = 10.00$ ft.

$L_w = 12.62$ ft. $H = 28.40$ ft.

Bottom of Casing
Elev. 57.78 ft.

Bottom of Aquifer
Elev. 43.00 ft.

WELL No. OW-21
SLUG TEST ANALYSIS

LEGEND

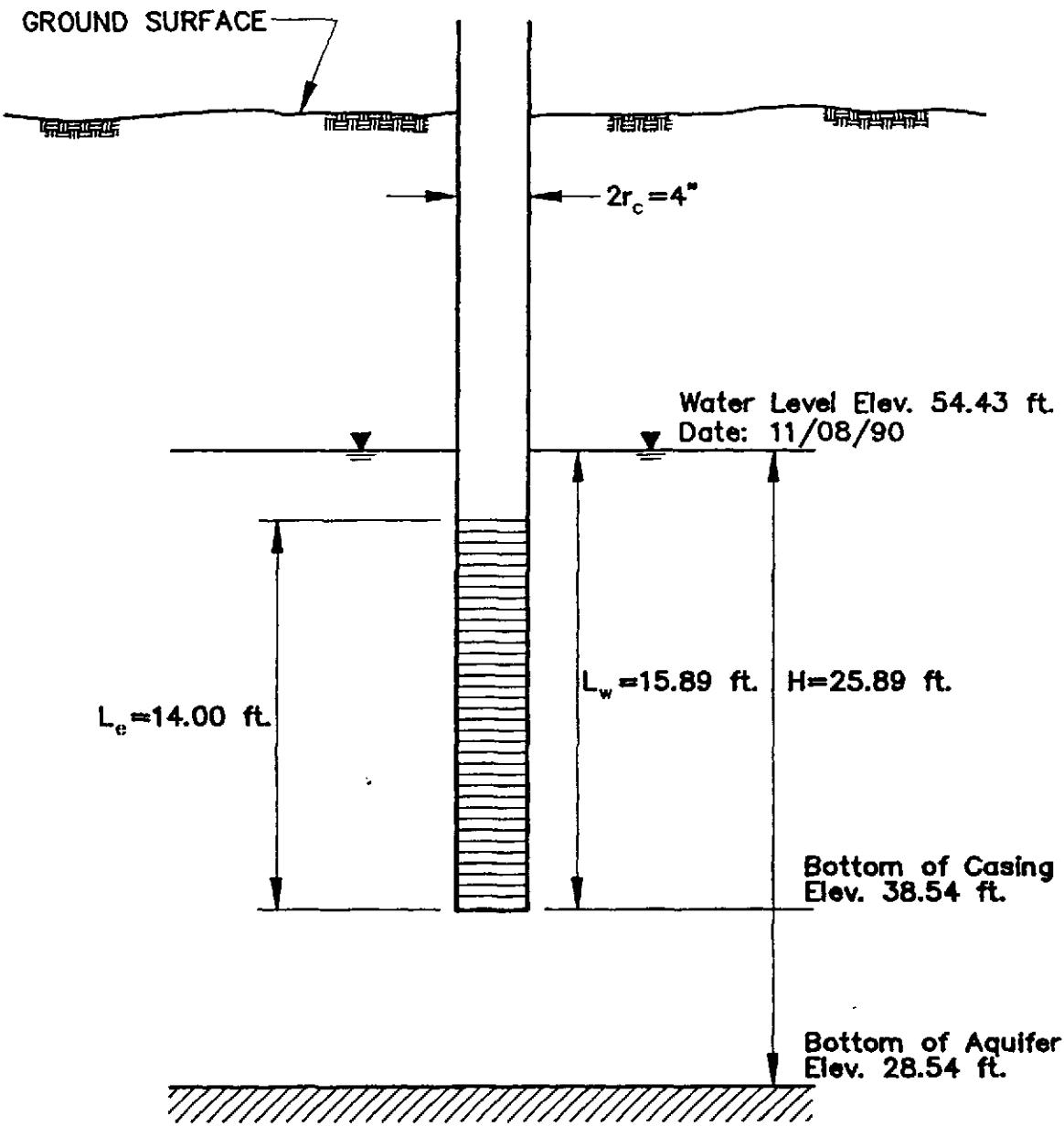
H = SATURATED THICKNESS OF THE AQUIFER

L_e = LENGTH OF SCREENED SECTION OF THE WELL

L_w = DISTANCE BETWEEN THE BOTTOM OF CASING
AND WATER TABLE

r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-247

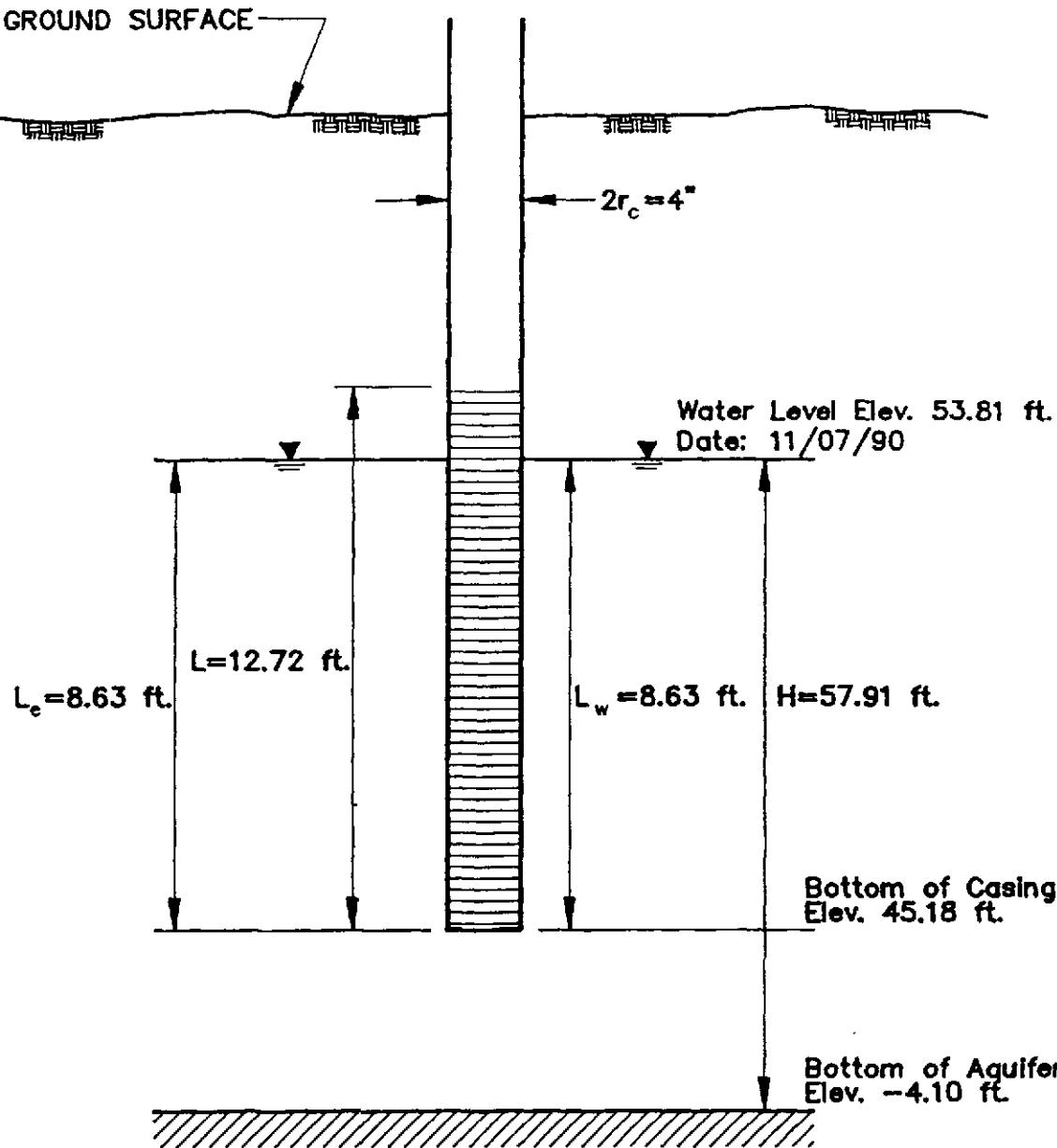


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
L_e = LENGTH OF SCREENED SECTION OF THE WELL
L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-248

**WELL No. OW-23
SLUG TEST ANALYSIS**

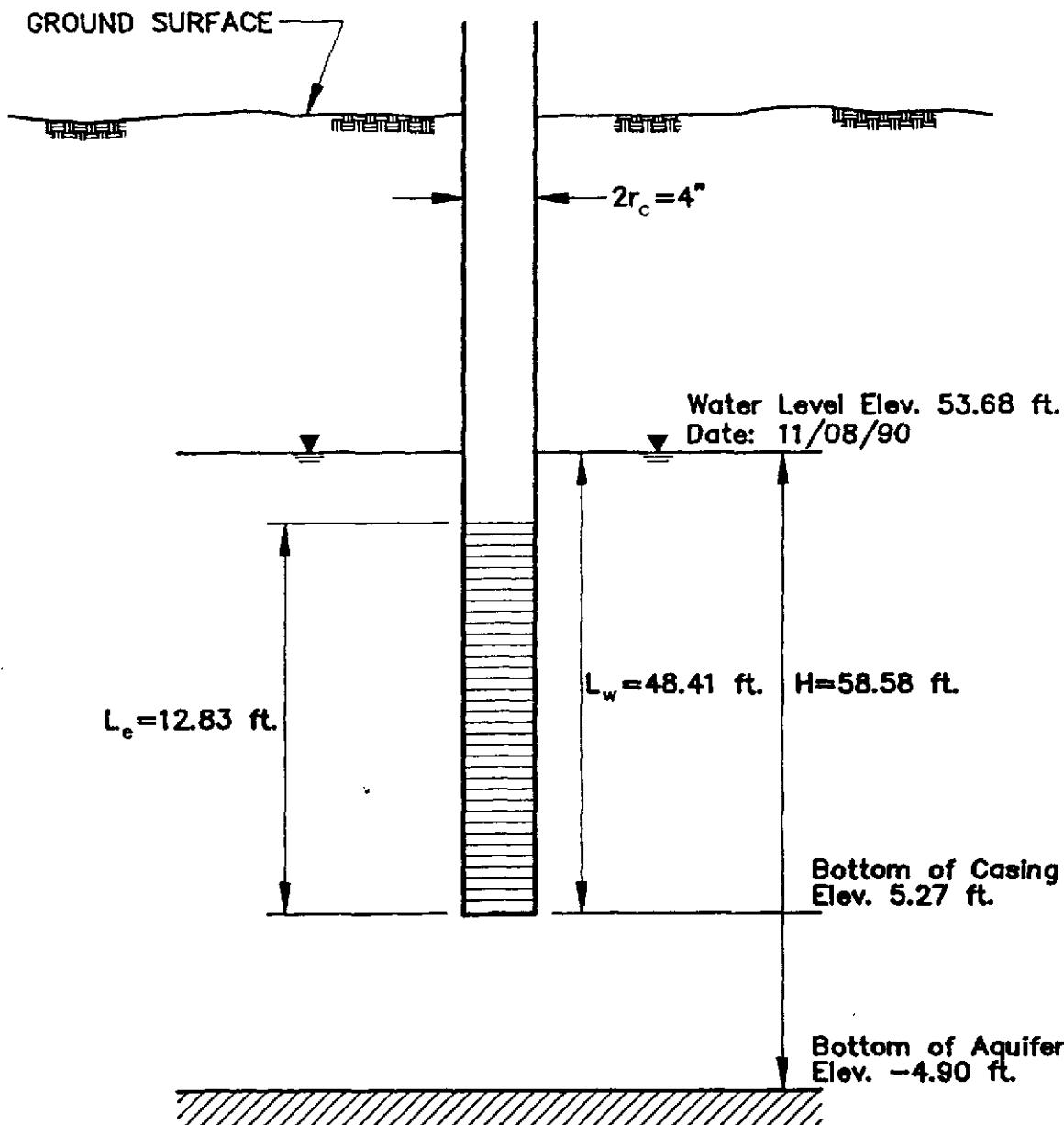


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-249

**WELL No. OW-30A
SLUG TEST ANALYSIS**

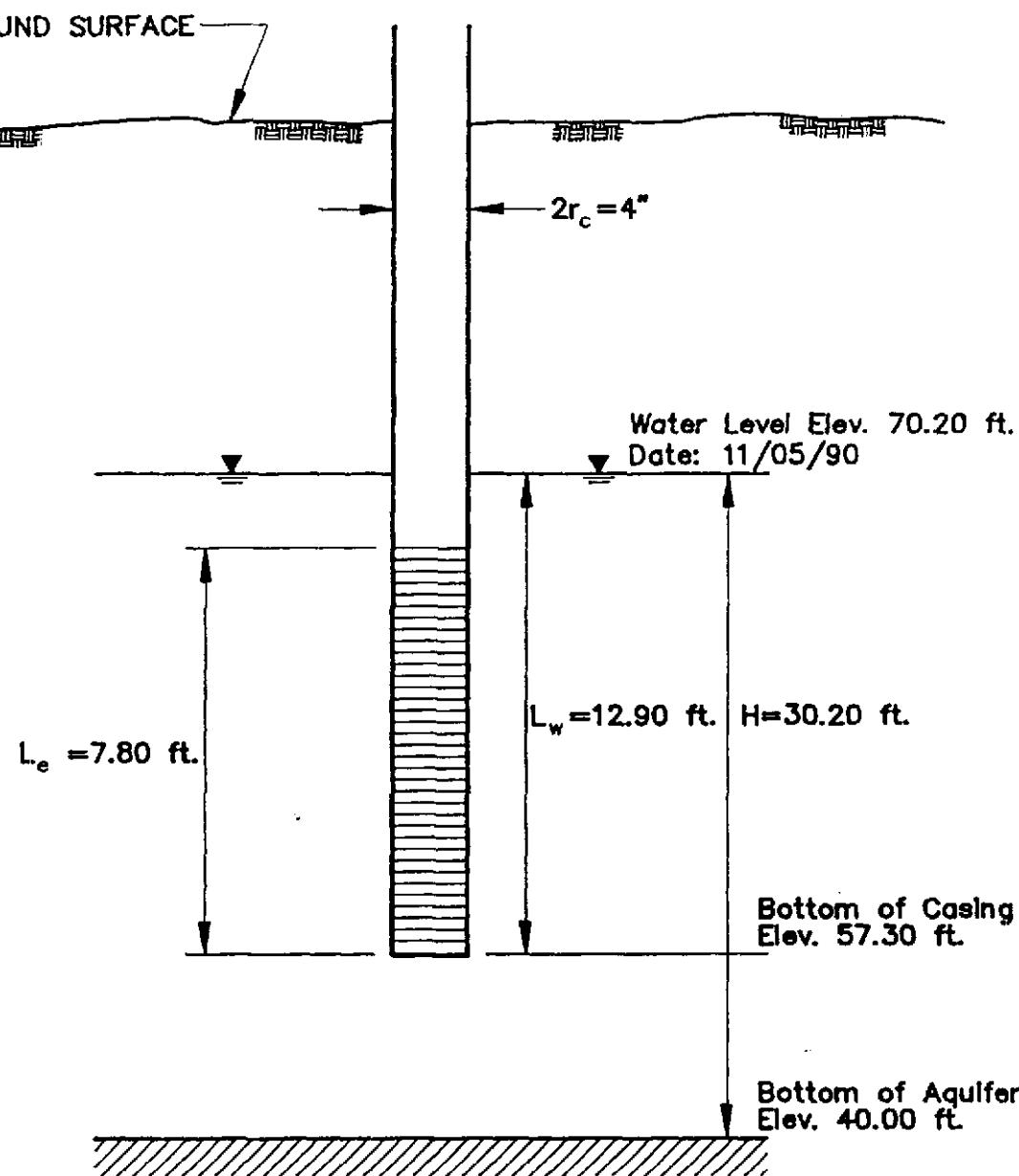


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-250

**WELL No. OW-30B
SLUG TEST ANALYSIS**

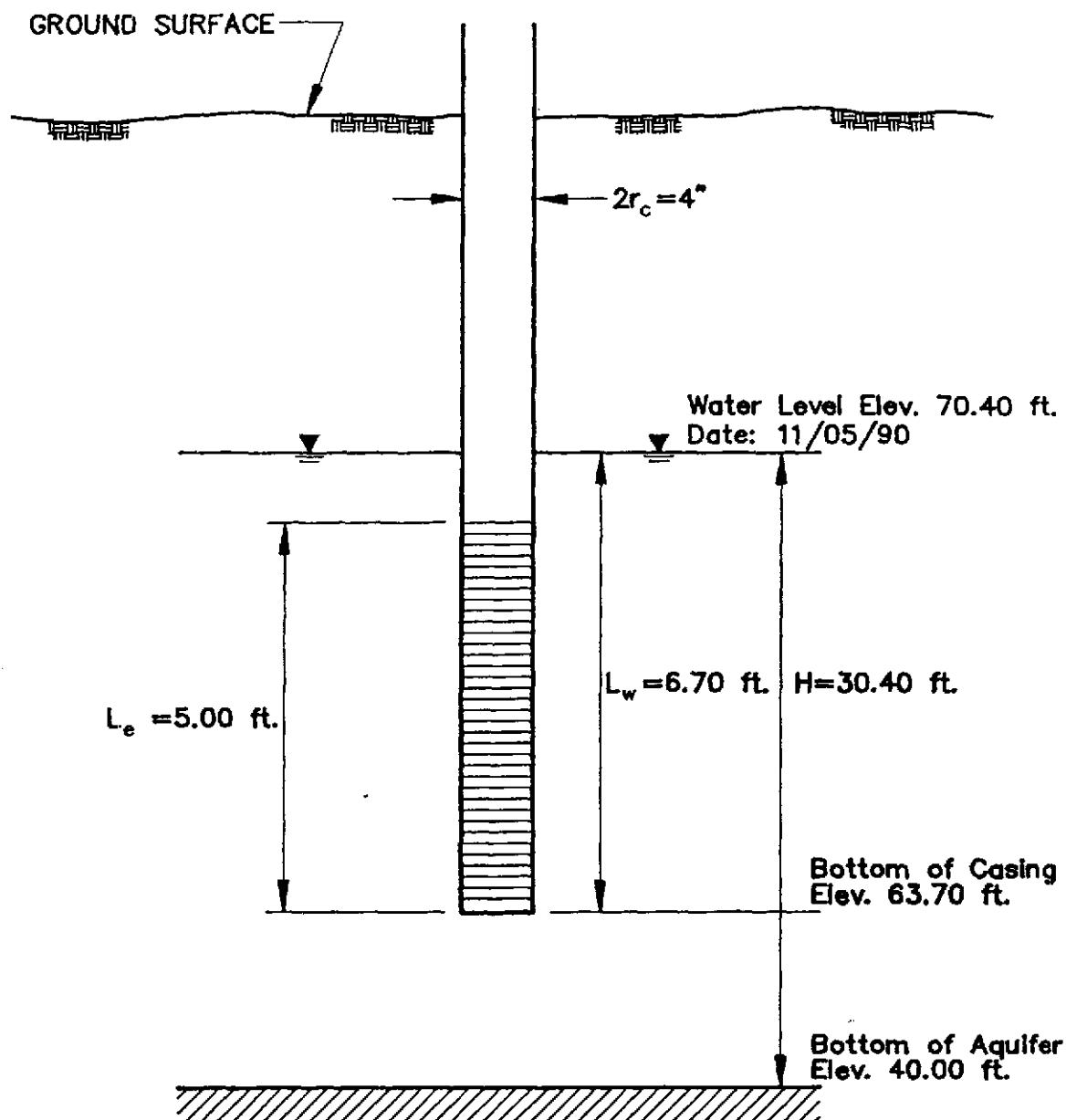


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-251

WELL No. OW-31
SLUG TEST ANALYSIS

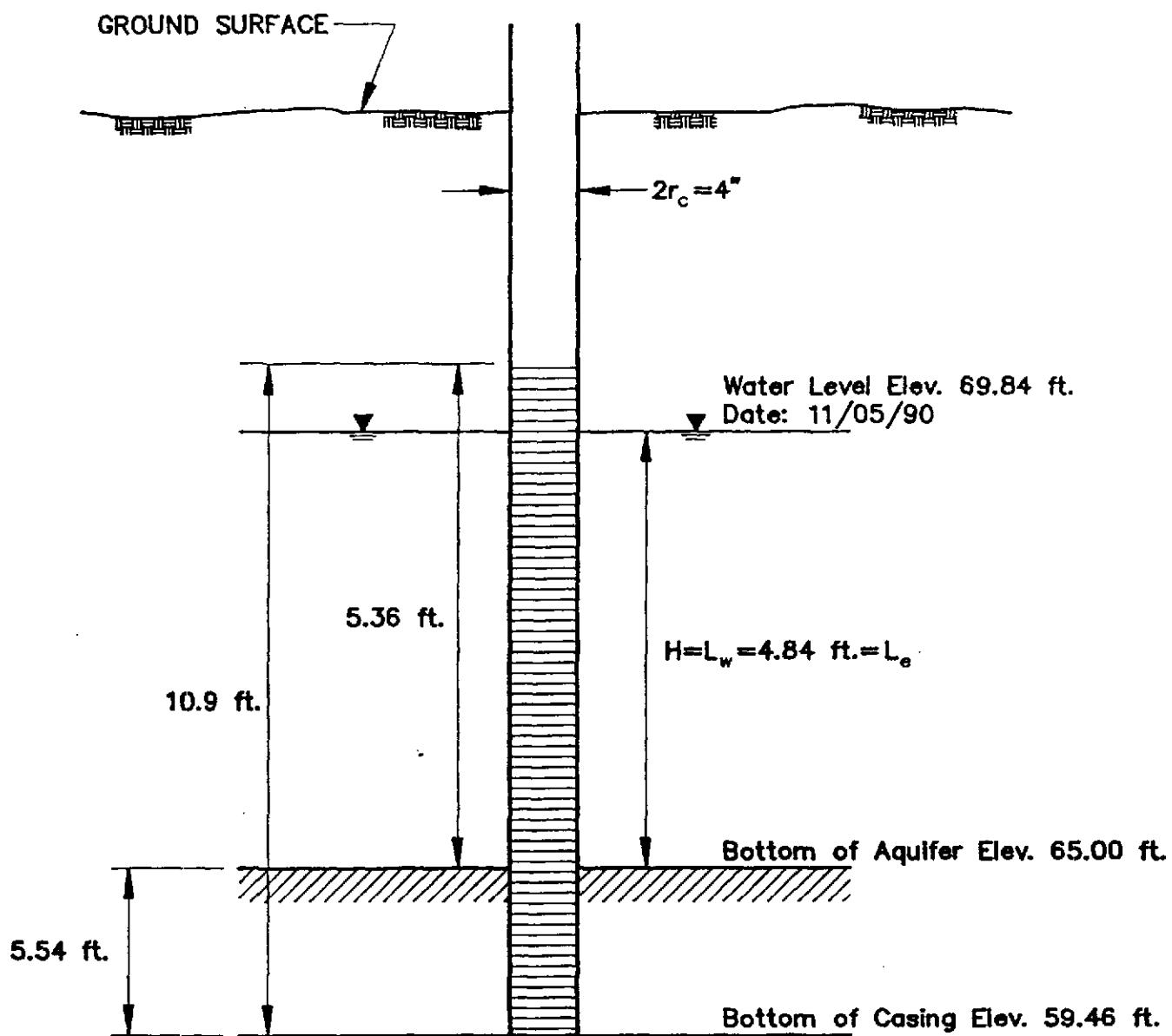


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-252

**WELL No. OW-32
SLUG TEST ANALYSIS**

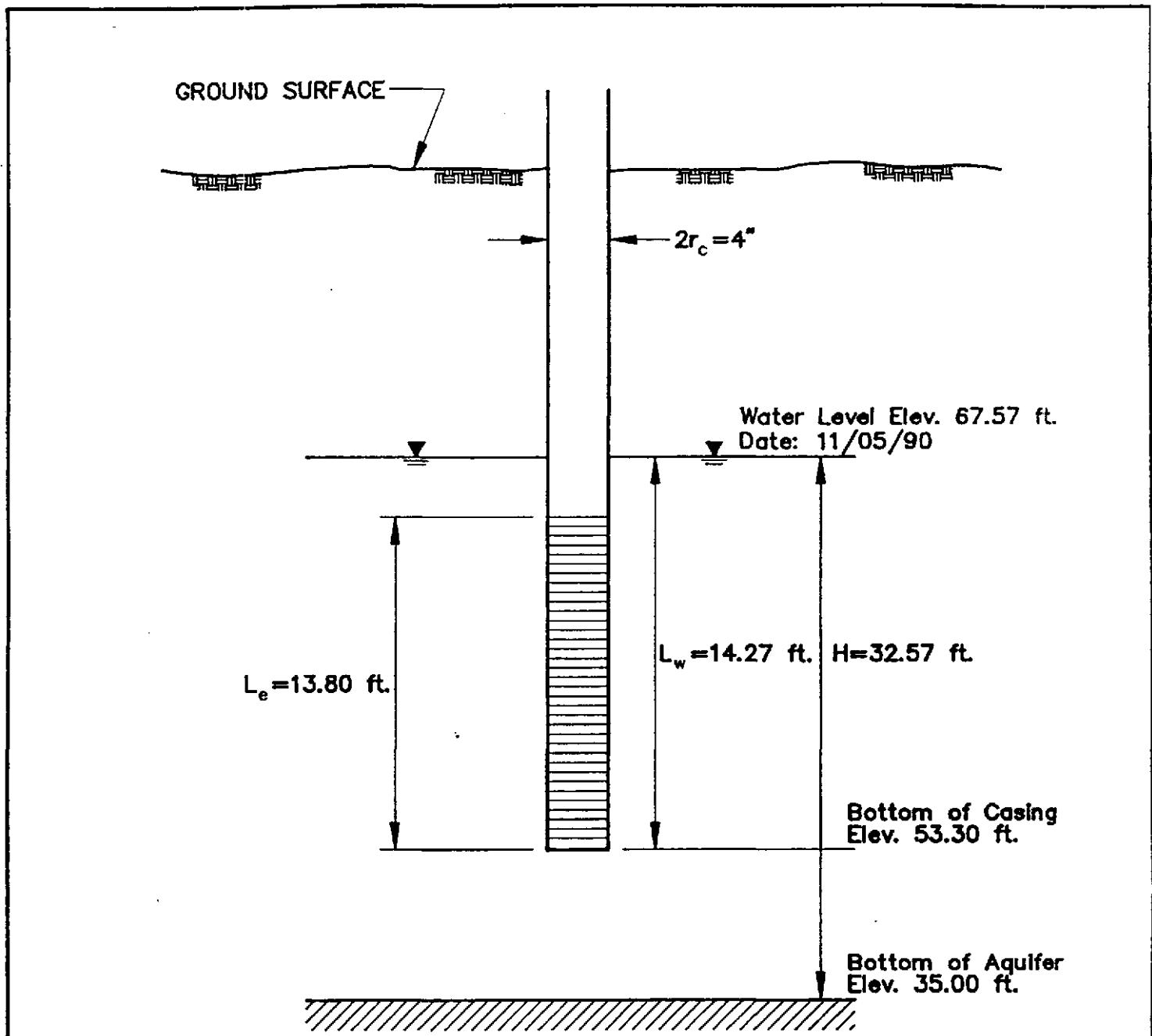


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-253

WELL No. OW-36
SLUG TEST ANALYSIS

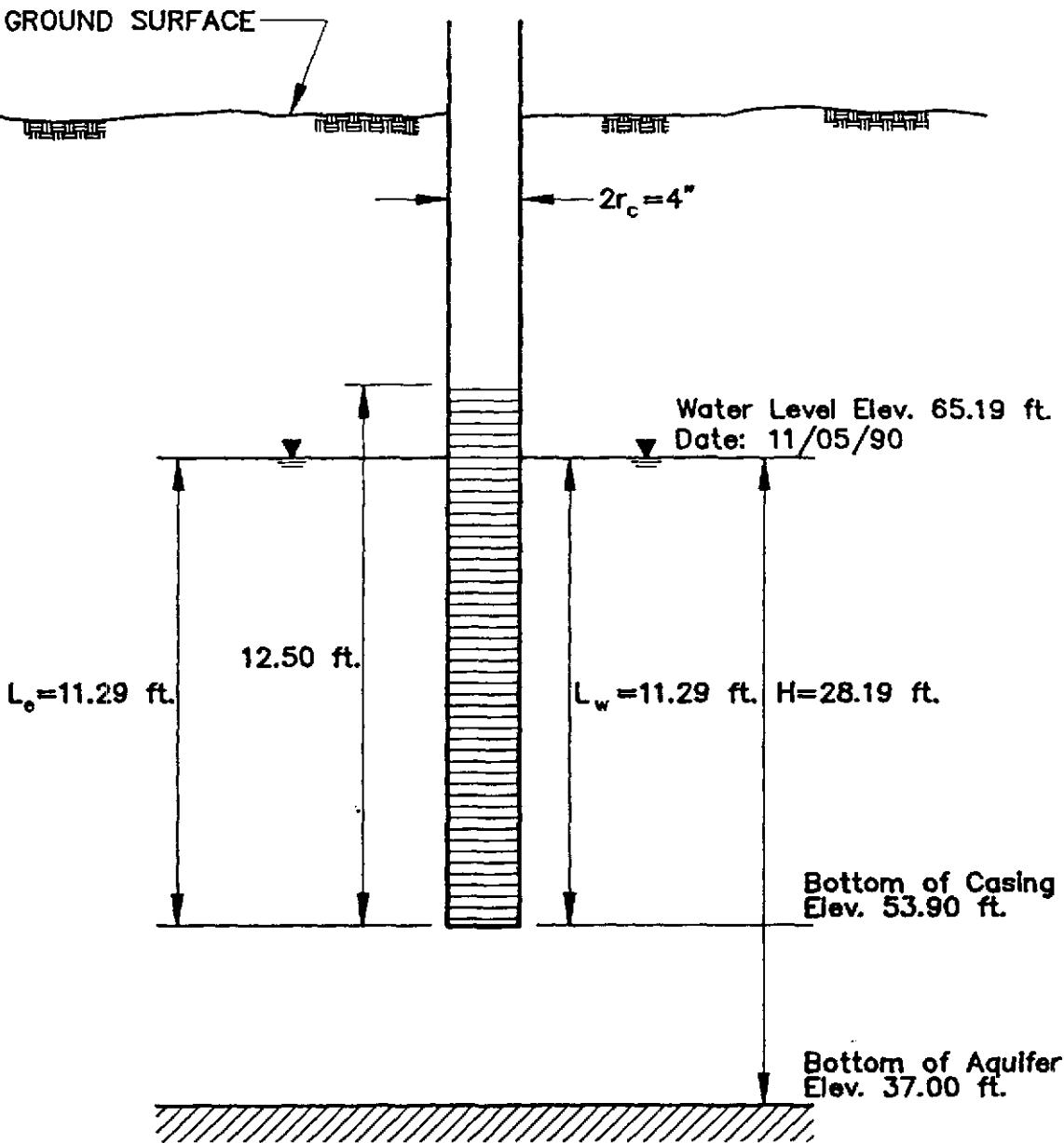


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-254

**WELL No. OW-37
SLUG TEST ANALYSIS**



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-255

**WELL No. OW-38
SLUG TEST ANALYSIS**

GROUND SURFACE

MESH

MESH

MESH

MESH

$$2r_c = 4"$$

$$L_e = 7.89 \text{ ft.}$$

$$12.10 \text{ ft.}$$

$$L_w = 7.89 \text{ ft.} \quad H = 20.93 \text{ ft.}$$

Water Level Elev. 64.93 ft.
Date: 11/07/90

Bottom of Casing
Elev. 57.04 ft.

Bottom of Aquifer
Elev. 44.00 ft.

LEGEND

H = SATURATED THICKNESS OF THE AQUIFER

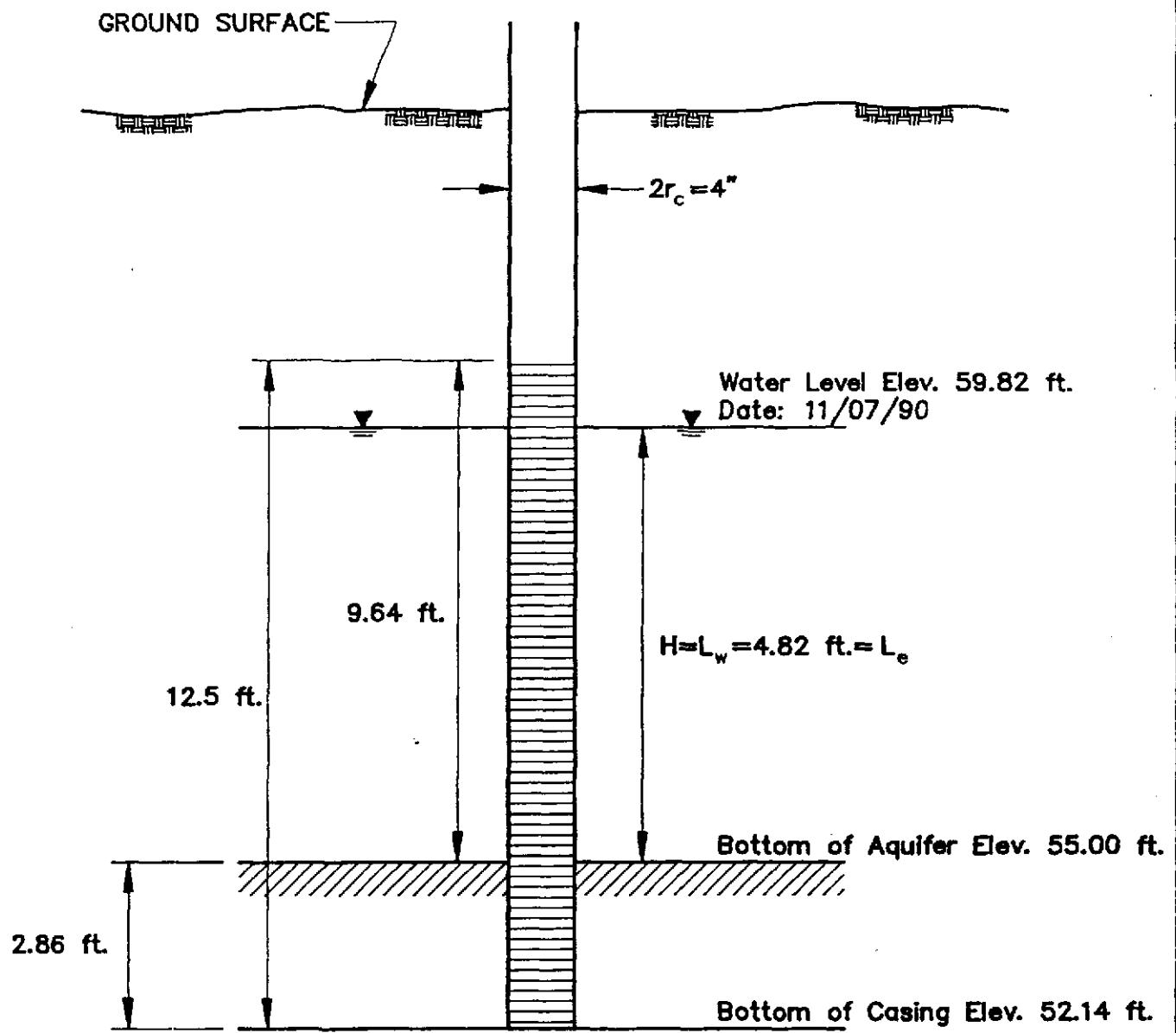
L_e = LENGTH OF SCREENED SECTION OF THE WELL

L_w = DISTANCE BETWEEN THE BOTTOM OF CASING
AND WATER TABLE

r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-256

WELL No. OW-39
SLUG TEST ANALYSIS

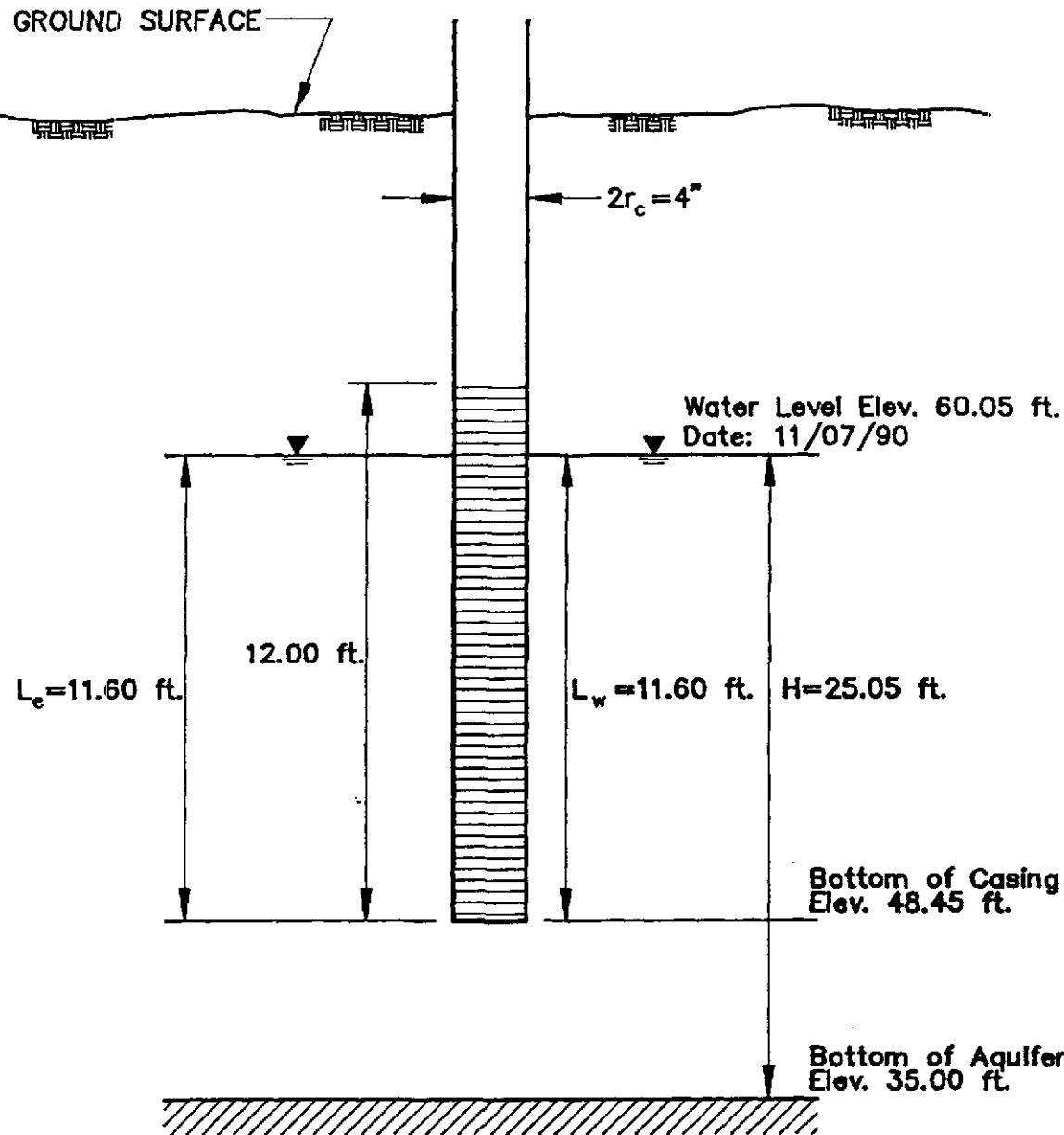


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-257

**WELL No. OW-40
SLUG TEST ANALYSIS**

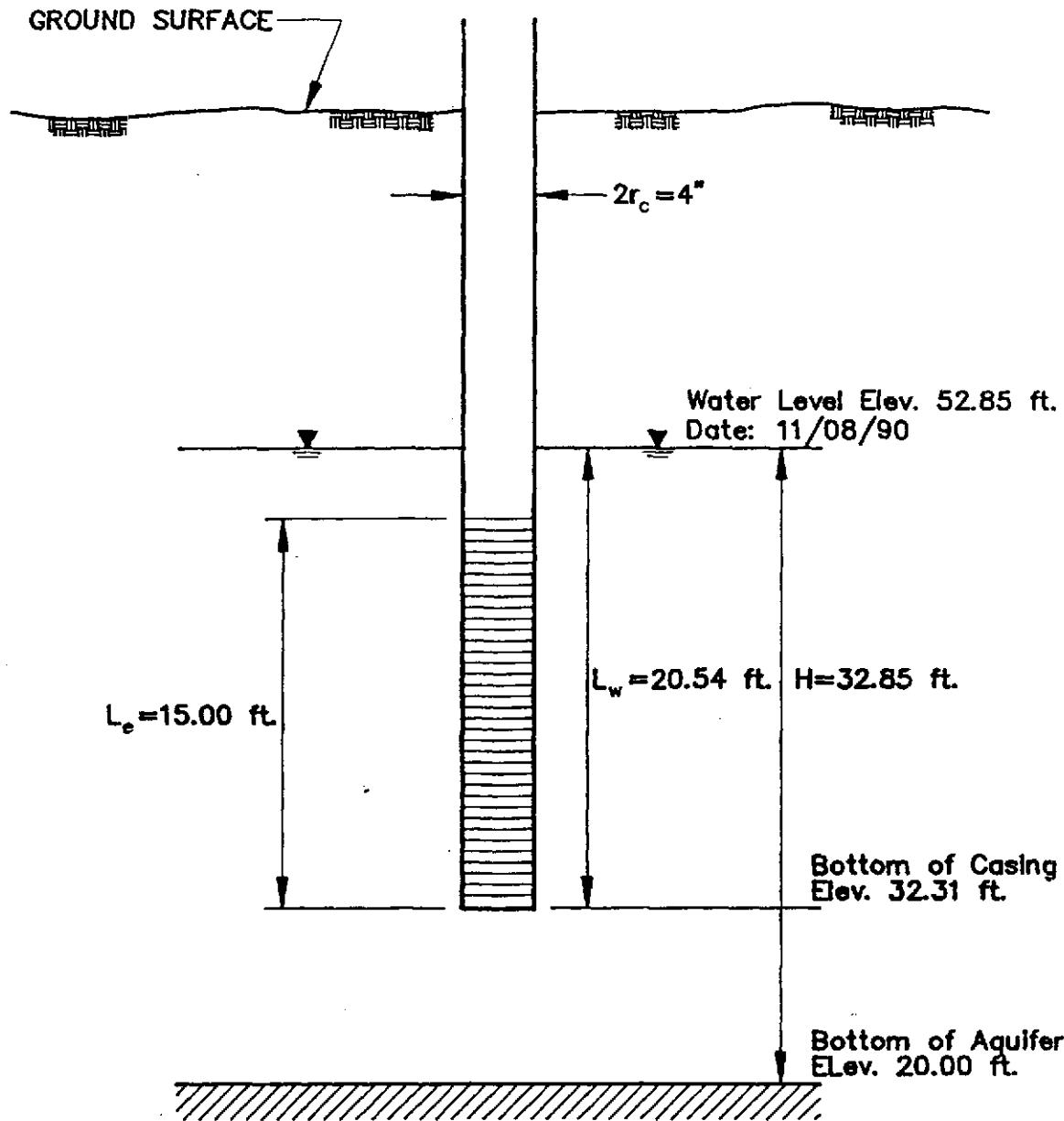


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-258

WELL No. OW-41
SLUG TEST ANALYSIS



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_c = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

Job No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-259

Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE B22

**WELL No. OW-42
SLUG TEST ANALYSIS**

GROUND SURFACE

$L_e = 10.00 \text{ ft.}$

$2r_c = 2"$

Water Level Elev. 51.84 ft.
Date: 11/08/90

$L_w = 28.99 \text{ ft. } H = 61.84 \text{ ft.}$

Bottom of Casing
Elev. 22.85 ft.

Bottom of Aquifer
Elev. -10.00 ft.

LEGEND

H = SATURATED THICKNESS OF THE AQUIFER

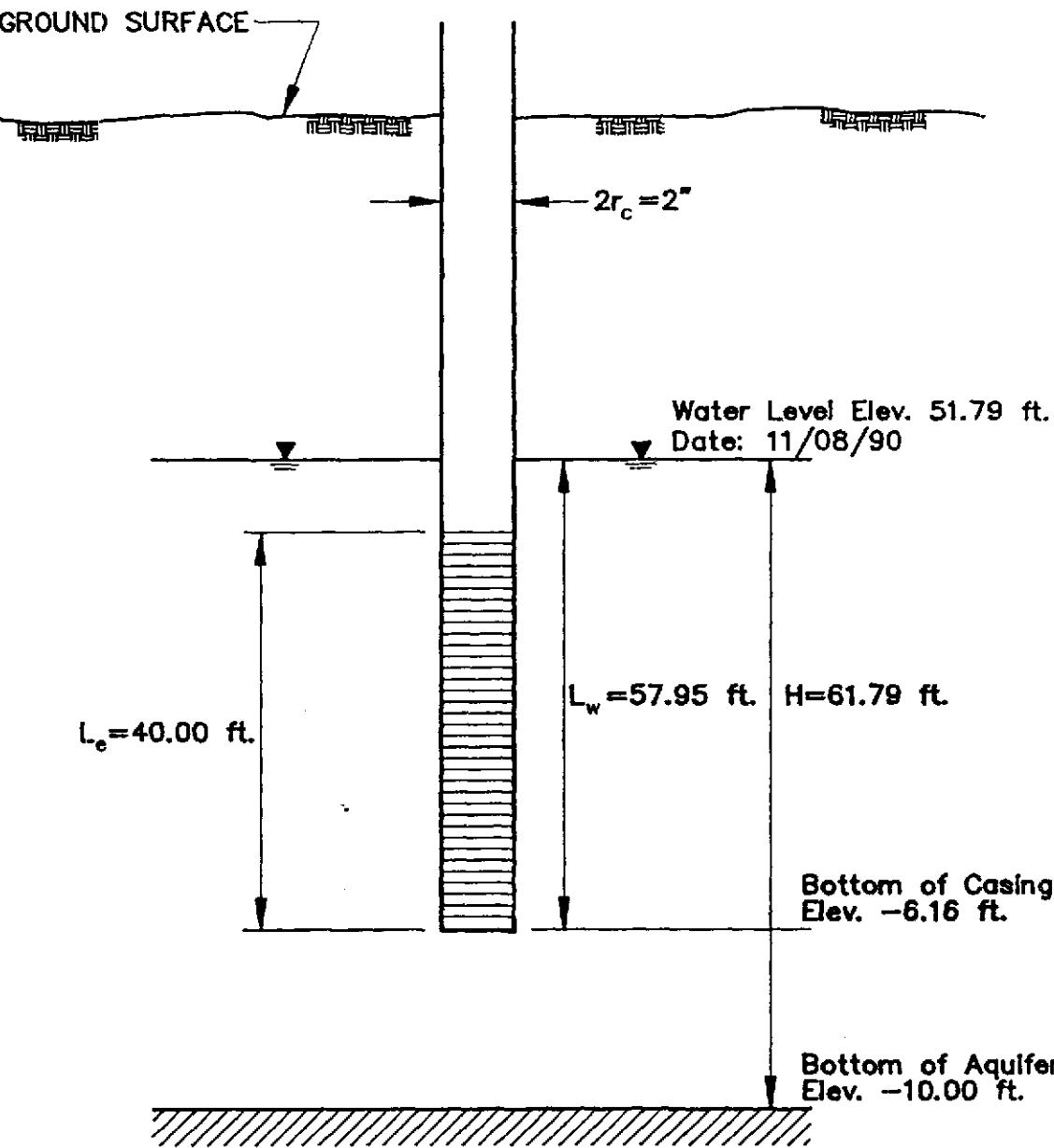
L_e = LENGTH OF SCREENED SECTION OF THE WELL

L_w = DISTANCE BETWEEN THE BOTTOM OF CASING
AND WATER TABLE

r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-260

WELL No. P-1A (TW-1S)
SLUG TEST ANALYSIS



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

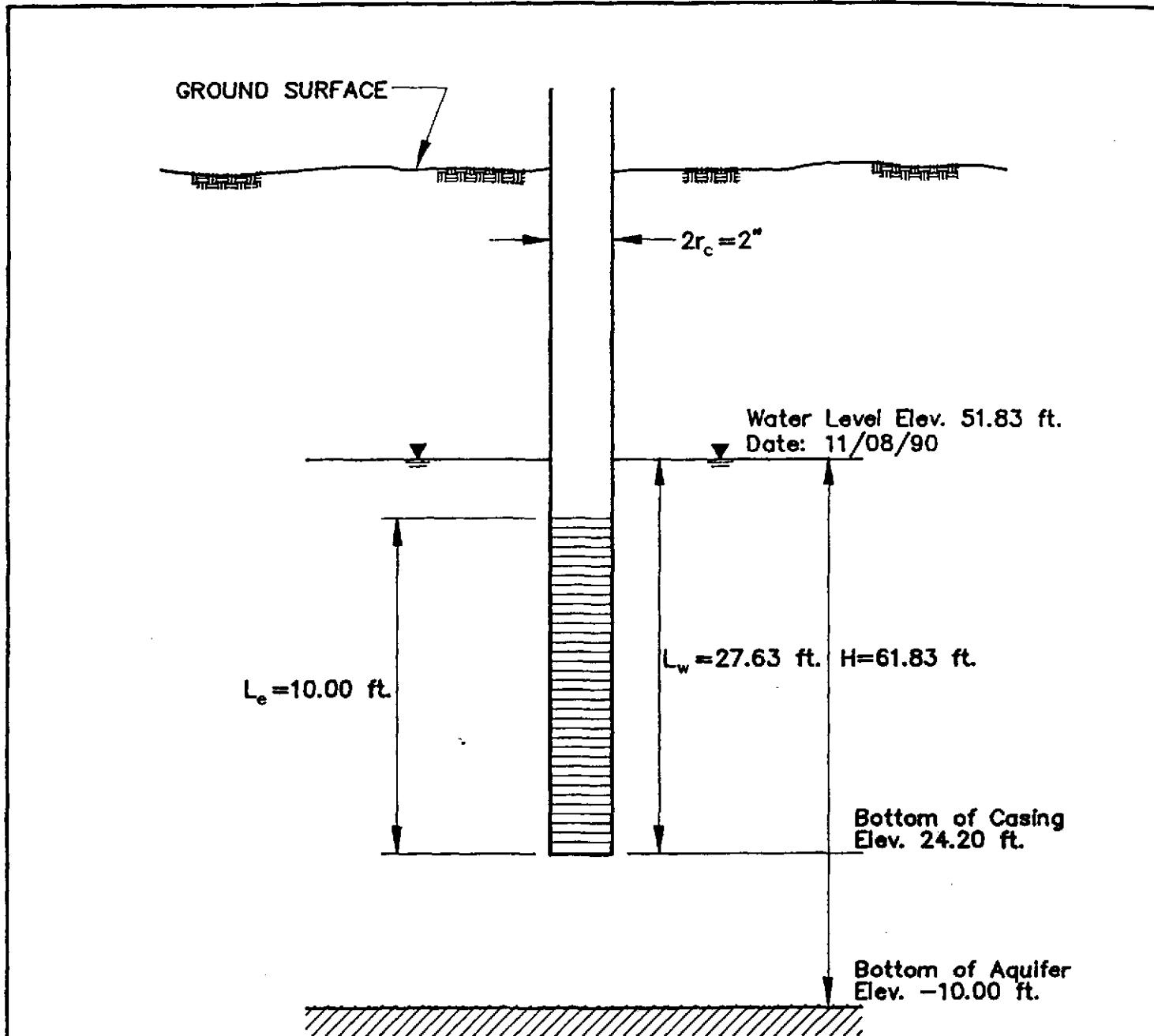
JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-261

Golder Associates

WELL No. P-1B (TW-1D)
SLUG TEST ANALYSIS

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE B24

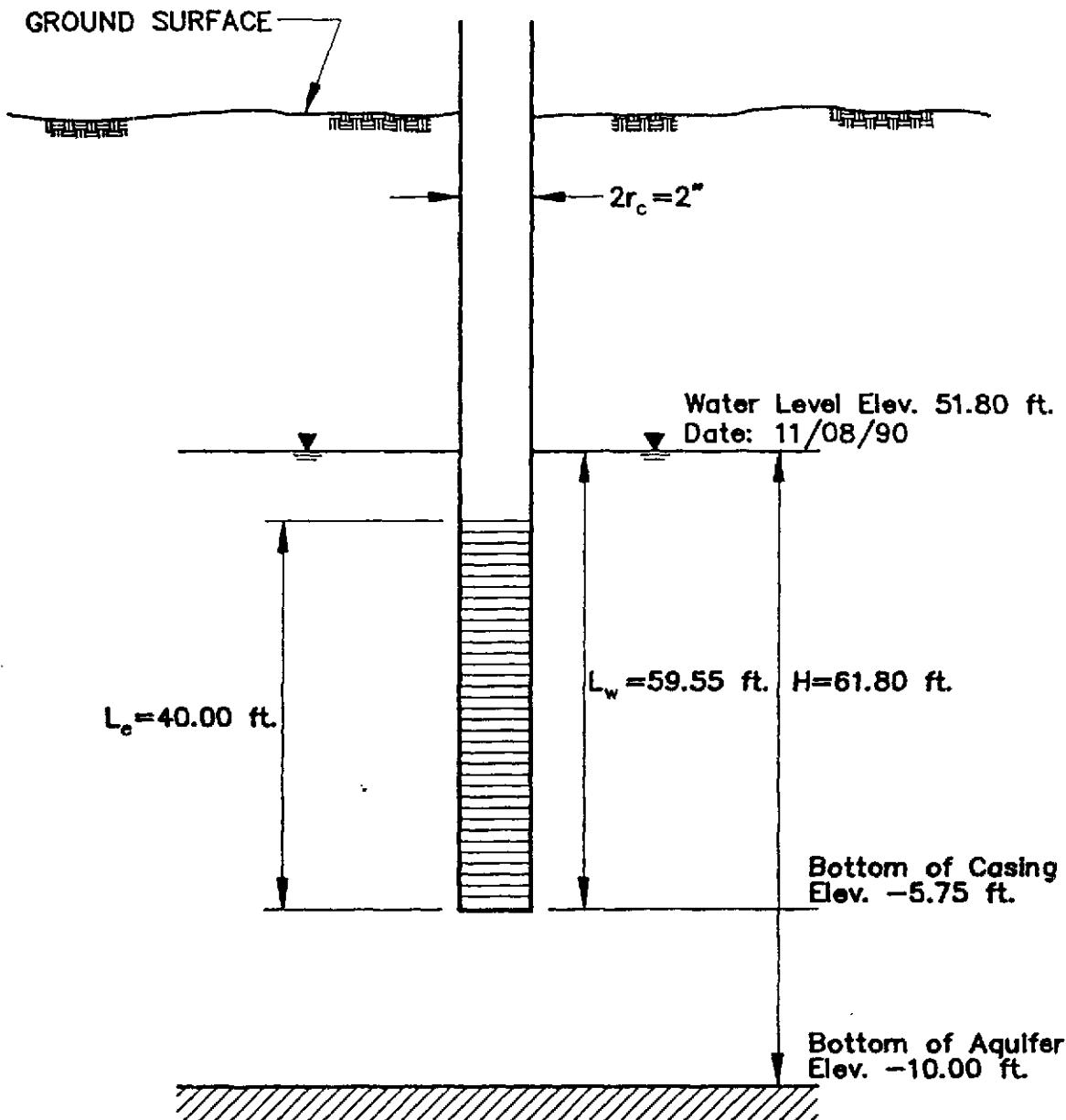


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-262

WELL No. P-2A (TW-2S)
SLUG TEST ANALYSIS



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	V/B	DWG. No.:	MA01-263

WELL No. P-2B (TW-2D)
SLUG TEST ANALYSIS

GROUND SURFACE

$L_e = 10.00 \text{ ft.}$

$2r_c = 2"$

Water Level Elev. 51.75 ft.
Date: 11/08/90

$L_w = 18.23 \text{ ft. } H = 61.75 \text{ ft.}$

Bottom of Casing
Elev. 33.52 ft.

Bottom of Aquifer
Elev. -10.00 ft.

LEGEND

H = SATURATED THICKNESS OF THE AQUIFER

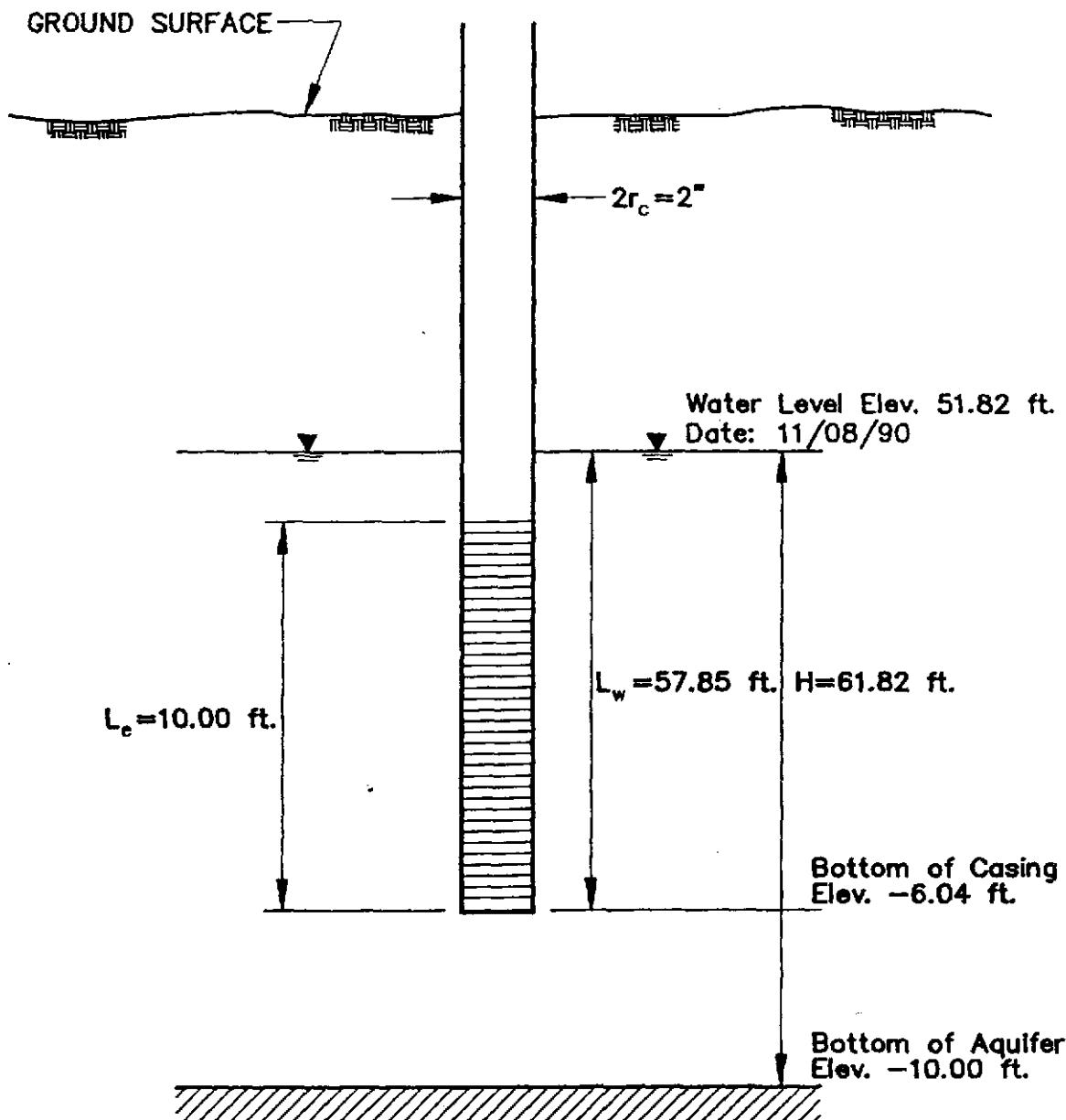
L_e = LENGTH OF SCREENED SECTION OF THE WELL

L_w = DISTANCE BETWEEN THE BOTTOM OF CASING
AND WATER TABLE

r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-264

WELL No. P-3A (TW-3S)
SLUG TEST ANALYSIS

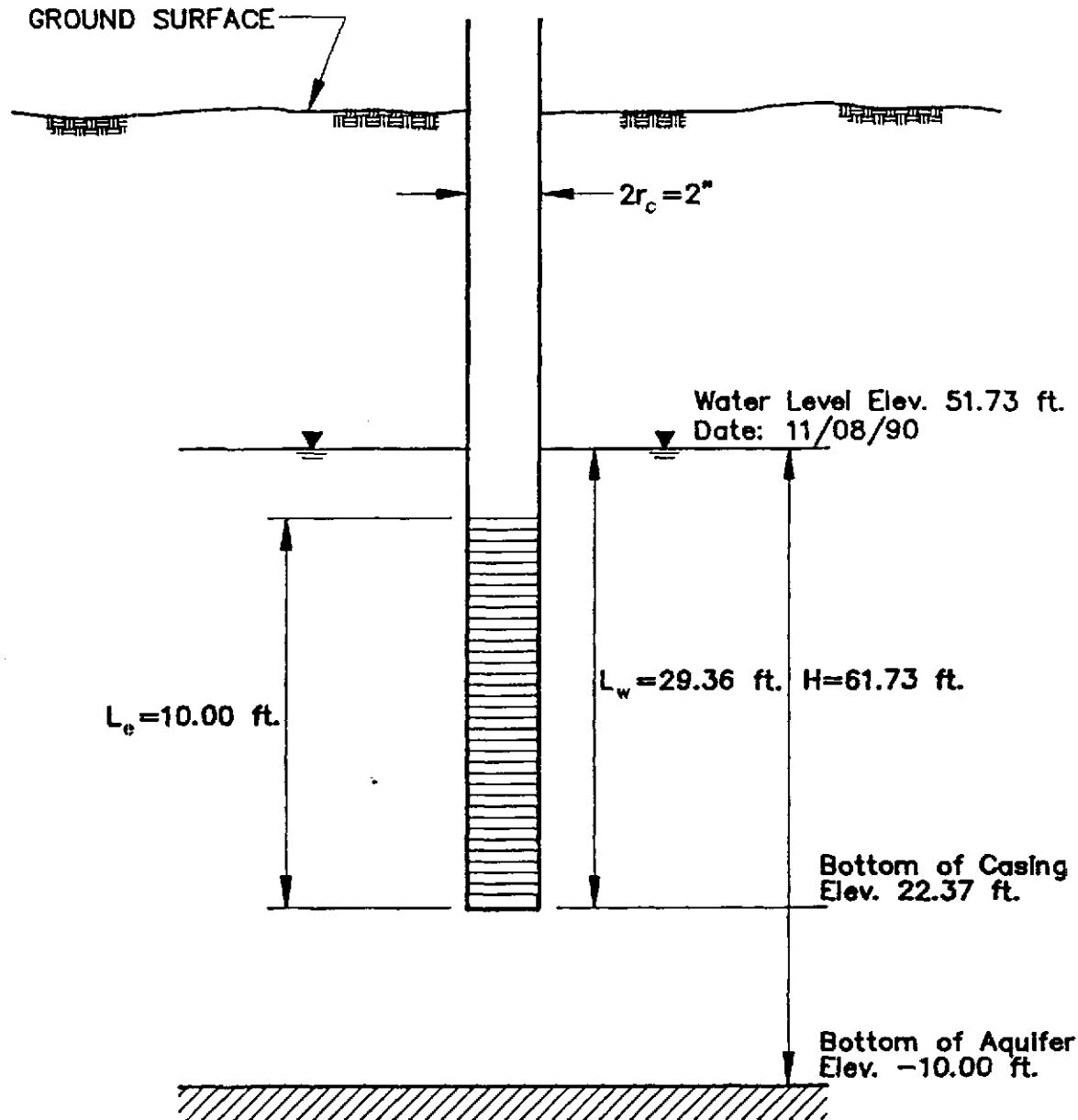


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_s = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. NO.:	MA01-265

WELL No. P-3B (TW-3D)
SLUG TEST ANALYSIS

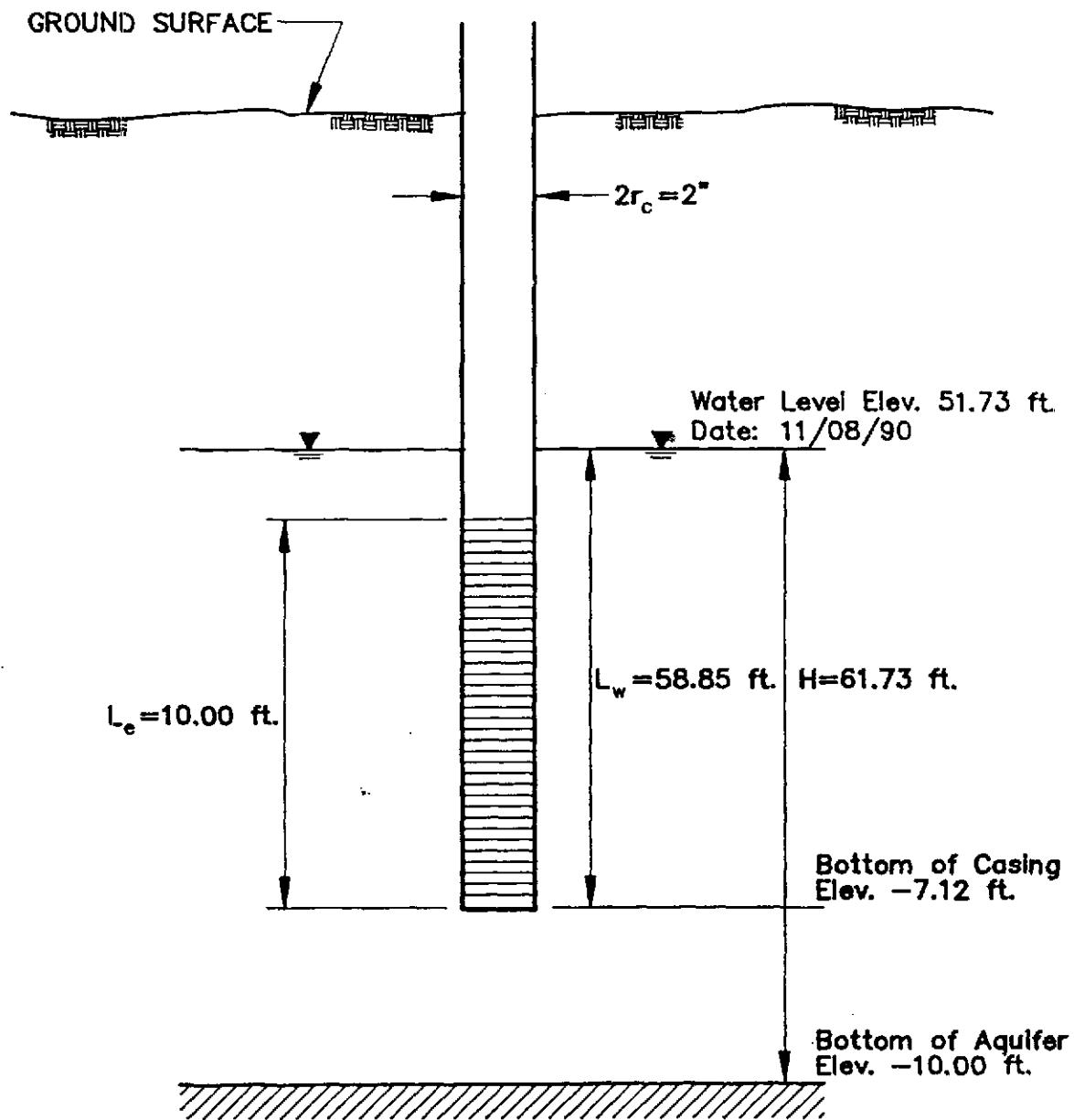


LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-266

WELL No. P-4A (TW-4S)
SLUG TEST ANALYSIS



LEGEND

- H = SATURATED THICKNESS OF THE AQUIFER
- L_e = LENGTH OF SCREENED SECTION OF THE WELL
- L_w = DISTANCE BETWEEN THE BOTTOM OF CASING AND WATER TABLE
- r_c = RADIUS OF CASING

JOB No.:	893-6255	SCALE:	N.T.S.
DRAWN:	MRM	DATE:	12/09/90
CHECKED:	VB	DWG. No.:	MA01-267

Golder Associates

WELL No. P-4B (TW-4D)
SLUG TEST ANALYSIS

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE B30

Appendix C
Variable Head Test Data

OW-11

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-11

DATE= 11/07/90
 CASING DIAMETER= 5.93 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 23.05 FEET
 INITIAL WATER ABOVE TRANS.= 14.74 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
13	10	44	0	15.366	0.63	1.00	0.00	-0.20
13	10	46	2	15.121	0.38	0.61	-0.22	-0.42
13	10	48	4	15.024	0.28	0.45	-0.34	-0.55
13	10	50	6	14.936	0.20	0.31	-0.50	-0.71
13	10	52	8	14.870	0.13	0.21	-0.68	-0.89
13	10	54	10	14.822	0.08	0.13	-0.88	-1.09
13	10	56	12	14.799	0.06	0.09	-1.03	-1.23
13	10	58	14	14.769	0.03	0.05	-1.34	-1.54
13	11	0	16	14.752	0.01	0.02	-1.71	-1.92
13	11	2	18	14.750	0.01	0.02	-1.82	-2.02
13	11	4	20	14.739	-0.00	-0.00	ERR	ERR
13	11	6	22	14.737	-0.00	-0.00	ERR	ERR
13	11	8	24	14.727	-0.01	-0.02	ERR	ERR
13	11	10	26	14.730	-0.01	-0.02	ERR	ERR
13	11	12	28	14.734	-0.01	-0.01	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-11

DATE= 11/07/90

CASING	DIAMETER=	5.93	INCHES
SAND	DIAMETER=	8	INCHES
OPEN	INTERVAL=	23.05	FEET
INITIAL WATER ABOVE TRANS.=		14.74	FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO			
RISING HEAD TEST								
13	12	32	0	13.472	1.27	1.00 **	0.00	0.10
13	12	34	2	13.765	0.98	0.77	-0.11	-0.01
13	12	36	4	13.983	0.76	0.60	-0.22	-0.12
13	12	38	6	14.171	0.57	0.45	-0.35	-0.24
13	12	40	8	14.321	0.42	0.33	-0.48	-0.38
13	12	42	10	14.430	0.31	0.24	-0.61	-0.51
13	12	44	12	14.511	0.23	0.18	-0.74	-0.64
13	12	46	14	14.588	0.15	0.12	-0.92	-0.82
13	12	48	16	14.620	0.12	0.09	-1.02	-0.92
13	12	50	18	14.666	0.07	0.06 **	-1.23	-1.13
13	12	52	20	14.689	0.05	0.04	-1.40	-1.30
13	12	54	22	14.704	0.04	0.03	-1.55	-1.44
13	12	56	24	14.726	0.01	0.01	-1.95	-1.84
13	12	58	26	14.729	0.01	0.01	-2.08	-1.97
13	13	0	28	14.743	-0.00	-0.00	ERR	ERR
13	13	2	30	14.747	-0.01	-0.01	ERR	ERR
13	13	4	32	14.770	-0.03	-0.02	ERR	ERR
13	13	6	34	14.754	-0.01	-0.01	ERR	ERR
13	13	8	36	14.766	-0.03	-0.02	ERR	ERR
13	13	10	38	14.757	-0.02	-0.01	ERR	ERR
13	13	12	40	14.774	-0.03	-0.03	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-11

DATE= 11/07/90
CASING DIAMETER= 5.93 INCHES
SAND DIAMETER= 8 INCHES
OPEN INTERVAL= 23.05 FEET
INITIAL WATER ABOVE TRANS.= 14.74 FEET

24-HR CLOCK TIME HOURS MINUTES SECONDS	ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
		HEAD (FEET)	HEAD (FEET)	HEAD RATIO			
-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 3.48E-02 CM/SEC FALLING HEAD*

K= 2.70E-02 CM/SEC RISING HEAD**

OW-12

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-12

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 38.5 FEET
 INITIAL WATER ABOVE TRANS.= 12.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
15	58	54	0	14.753	1.83	1.00	0.00	0.26
15	58	56	2	14.257	1.34	0.73	-0.14	0.13
15	58	58	4	14.067	1.15	0.63	-0.20	0.06
15	59	0	6	14.018	1.10	0.60	-0.22	0.04
15	59	2	8	13.838	0.92	0.50	-0.30	-0.04
15	59	4	10	13.747	0.83	0.45	-0.35	-0.08
15	59	6	12	13.676	0.76	0.41	-0.38	-0.12
15	59	8	14	13.627	0.71	0.39	-0.41	-0.15
15	59	10	16	13.767	0.85	0.46	-0.34	-0.07
15	59	12	18	13.495	0.58	0.31	-0.50	-0.24
15	59	14	20	13.720	0.80	0.44	-0.36	-0.10
15	59	16	22	13.415	0.50	0.27	-0.57	-0.30
15	59	18	24	13.390	0.47	0.26	-0.59	-0.33
15	59	20	26	13.778	0.86	0.47	-0.33	-0.07
15	59	22	28	13.679	0.76	0.41	-0.38	-0.12
15	59	24	30	13.233	0.31	0.17	-0.77	-0.50
15	59	26	32	13.208	0.29	0.16	-0.80	-0.54
15	59	28	34	13.618	0.70	0.38	-0.42	-0.16
15	59	30	36	13.184	0.26	0.14	-0.84	-0.58
15	59	32	38	13.146	0.23	0.12	-0.91	-0.65
15	59	34	40	13.215	0.29	0.16	-0.79	-0.53
15	59	36	42	13.442	0.52	0.28	-0.55	-0.28
15	59	38	44	13.443	0.52	0.29	-0.54	-0.28
15	59	40	46	13.499	0.58	0.32	-0.50	-0.24
15	59	42	48	13.280	0.36	0.20	-0.71	-0.44
15	59	44	50	13.430	0.51	0.28	-0.56	-0.29
15	59	46	52	13.348	0.43	0.23	-0.63	-0.37
15	59	48	54	13.197	0.28	0.15	-0.82	-0.56
15	59	50	56	12.971	0.05	0.03	-1.55	-1.29
15	59	52	58	13.374	0.45	0.25	-0.61	-0.34
15	59	54	60	13.262	0.34	0.19	-0.73	-0.47
15	59	56	62	12.968	0.05	0.03	-1.58	-1.31
15	59	58	64	12.936	0.02	0.01	-2.06	-1.79
16	0	0	66	13.085	0.17	0.09	-1.04	-0.78

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-12

DATE= 11/08/90

CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 38.5 FEET

INITIAL WATER ABOVE TRANS.= 12.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
16	0	2	68	13.077	0.16	0.09	-1.07	-0.80
16	0	6	72	12.947	0.03	0.01	-1.83	-1.57
16	0	10	76	13.034	0.11	0.06	-1.21	-0.94
16	0	12	78	13.161	0.24	0.13	-0.88	-0.62
16	0	14	80	13.084	0.16	0.09	-1.05	-0.79
16	0	18	84	12.932	0.01	0.01	-2.18	-1.91
16	0	22	88	13.289	0.37	0.20	-0.70	-0.43
16	0	24	90	13.139	0.22	0.12	-0.92	-0.66
16	0	26	92	13.145	0.23	0.12	-0.91	-0.65
16	0	28	94	13.172	0.25	0.14	-0.86	-0.60
16	0	30	96	12.986	0.07	0.04	-1.45	-1.18
16	0	40	106	13.053	0.13	0.07	-1.14	-0.88

DECEMBER 1990

693-6255

VARIABLE HEAD TEST

WELL NO. OW-12

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 38.5 FEET
 INITIAL WATER ABOVE TRANS.= 12.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO				
RISING HEAD TEST									
16	0	48	0	11.393	1.53	1.00	**	0.00	0.18
16	0	50	2	11.544	1.38	0.90	-0.05	0.14	
16	0	52	4	11.940	0.98	0.64	-0.19	-0.01	
16	0	54	6	11.919	1.00	0.66	-0.18	0.00	
16	0	56	8	12.106	0.81	0.53	-0.27	-0.09	
16	0	58	10	12.268	0.65	0.43	-0.37	-0.19	
16	1	0	12	12.215	0.70	0.46	-0.34	-0.15	
16	1	2	14	12.064	0.86	0.56	-0.25	-0.07	
16	1	4	16	12.406	0.51	0.34	-0.47	-0.29	
16	1	6	18	12.446	0.47	0.31	-0.51	-0.32	
16	1	8	20	12.553	0.37	0.24	-0.62	-0.44	
16	1	10	22	12.552	0.37	0.24	**	-0.62	-0.43
16	1	12	24	12.313	0.61	0.40	-0.40	-0.22	
16	1	14	26	12.323	0.60	0.39	-0.41	-0.22	
16	1	16	28	12.653	0.27	0.17	-0.76	-0.57	
16	1	18	30	12.376	0.54	0.36	-0.45	-0.26	
16	1	20	32	12.736	0.18	0.12	-0.92	-0.74	
16	1	22	34	12.726	0.19	0.13	-0.90	-0.71	
16	1	24	36	12.517	0.40	0.26	-0.58	-0.39	
16	1	26	38	12.645	0.28	0.18	-0.74	-0.56	
16	1	28	40	12.905	0.01	0.01	-2.01	-1.83	
16	1	30	42	12.807	0.11	0.07	-1.13	-0.95	
16	1	32	44	12.639	0.28	0.18	-0.73	-0.55	
16	1	34	46	12.558	0.36	0.24	-0.62	-0.44	
16	1	36	48	12.587	0.33	0.22	-0.66	-0.48	
16	1	38	50	12.802	0.12	0.08	-1.11	-0.93	
16	1	40	52	12.711	0.21	0.14	-0.86	-0.68	
16	1	42	54	12.725	0.19	0.13	-0.89	-0.71	
16	1	46	58	12.819	0.10	0.07	-1.18	-1.00	
16	1	48	60	12.867	0.05	0.03	-1.46	-1.27	
16	1	50	62	12.685	0.23	0.15	-0.81	-0.63	
16	1	54	66	12.906	0.01	0.01	-2.04	-1.86	
16	1	56	68	12.683	0.24	0.16	-0.81	-0.63	
16	1	58	70	12.669	0.25	0.16	-0.78	-0.60	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-12

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 38.5 FEET
 INITIAL WATER ABOVE TRANS.= 12.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
16	2	0	72	12.795	0.12	0.08	-1.09	-0.90
16	2	2	74	12.916	0.00	0.00	-2.61	-2.43
16	2	4	76	12.771	0.15	0.10	-1.01	-0.83
16	2	6	78	12.853	0.07	0.04	-1.36	-1.17
16	2	8	80	12.880	0.04	0.03	-1.58	-1.40
16	2	14	86	12.894	0.03	0.02	-1.77	-1.58
16	2	18	90	12.771	0.15	0.10	-1.01	-0.83
16	2	20	92	12.869	0.05	0.03	-1.48	-1.29
16	2	22	94	12.790	0.13	0.09	-1.07	-0.89
16	2	24	96	12.868	0.05	0.03	-1.47	-1.29
16	2	26	98	12.795	0.12	0.08	-1.09	-0.90
16	2	30	102	12.792	0.13	0.08	-1.08	-0.89
16	2	32	104	12.904	0.02	0.01	-1.99	-1.81
16	2	34	106	12.913	0.01	0.00	-2.36	-2.17
16	2	38	110	12.913	0.01	0.00	-2.33	-2.14

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-12

DATE= 11/08/90
CASING DIAMETER= 4 INCHES
SAND DIAMETER= 8 INCHES
OPEN INTERVAL= 38.5 FEET
INITIAL WATER ABOVE TRANS.= 12.92 FEET

24-HR CLOCK TIME	ELAPSED	WATER			LOG		
		TIME	TRANS.	HEAD	HEAD	HEAD	LOG
HOURS	MINUTES	SECONDS	(SEC)	(FEET)	RATIO	RATIO	HEAD
-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 2.75E-03 CM/SEC FALLING HEAD*

K= 3.38E-03 CM/SEC RISING HEAD**

OW-13

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-13

DATE= 11/07/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	8 INCHES
OPEN	INTERVAL=	18.5 FEET
INITIAL WATER ABOVE TRANS.=		15.5 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD (FEET)	HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD				
FALLING HEAD TEST									
14	8	28	0	16.717	1.22	1.00	*	0.00	0.09
14	8	30	2	16.351	0.85	0.70	-	-0.16	-0.07
14	8	32	4	16.136	0.64	0.52	-	-0.28	-0.20
14	8	34	6	15.950	0.45	0.37	*	-0.43	-0.35
14	8	36	8	15.852	0.35	0.29	-	-0.54	-0.45
14	8	38	10	15.682	0.18	0.15	-	-0.83	-0.74
14	8	40	12	15.656	0.16	0.13	-	-0.89	-0.81
14	8	42	14	15.570	0.07	0.06	-	-1.24	-1.15
14	8	44	16	15.540	0.04	0.03	-	-1.48	-1.40
14	8	46	18	15.538	0.04	0.03	-	-1.50	-1.42
14	8	48	20	15.497	-0.00	-0.00	-	ERR	ERR
14	8	50	22	15.517	0.02	0.01	-	-1.84	-1.76
14	8	52	24	15.486	-0.01	-0.01	-	ERR	ERR
14	8	54	26	15.482	-0.02	-0.01	-	ERR	ERR
14	8	56	28	15.476	-0.02	-0.02	-	ERR	ERR
14	8	58	30	15.429	-0.07	-0.06	-	ERR	ERR
14	9	0	32	15.469	-0.03	-0.03	-	ERR	ERR
14	9	2	34	15.482	-0.02	-0.02	-	ERR	ERR
14	9	4	36	15.466	-0.03	-0.03	-	ERR	ERR
14	9	6	38	15.460	-0.04	-0.03	-	ERR	ERR
14	9	8	40	15.480	-0.02	-0.02	-	ERR	ERR
14	9	10	42	15.460	-0.04	-0.03	-	ERR	ERR
14	9	12	44	15.470	-0.03	-0.02	-	ERR	ERR
14	9	14	46	15.478	-0.02	-0.02	-	ERR	ERR
14	9	16	48	15.472	-0.03	-0.02	-	ERR	ERR
14	9	18	50	15.464	-0.04	-0.03	-	ERR	ERR
14	9	20	52	15.462	-0.04	-0.03	-	ERR	ERR
14	9	22	54	15.470	-0.03	-0.02	-	ERR	ERR
14	9	24	56	15.478	-0.02	-0.02	-	ERR	ERR
14	9	40	72	15.457	-0.04	-0.04	-	ERR	ERR
14	9	42	74	15.469	-0.03	-0.03	-	ERR	ERR
14	9	44	76	15.157	-0.34	-0.28	-	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-13

DATE= 11/07/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	8 INCHES
OPEN	INTERVAL=	18.5 FEET
INITIAL WATER ABOVE TRANS.=		15.5 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
14	9	46	0	13.986	1.51	1.00	**	0.00
14	9	48	2	14.457	1.04	0.69	-0.16	0.02
14	9	50	4	14.766	0.73	0.48	-0.31	-0.13
14	9	52	6	14.982	0.52	0.34	-0.47	-0.29
14	9	54	8	15.128	0.37	0.25	**	-0.61
14	9	56	10	15.180	0.32	0.21	-0.68	-0.50
14	9	58	12	15.237	0.26	0.17	-0.76	-0.58
14	10	0	14	15.350	0.15	0.10	-1.00	-0.82
14	10	2	16	15.385	0.12	0.08	-1.12	-0.94
14	10	4	18	15.399	0.10	0.07	-1.18	-1.00
14	10	6	20	15.426	0.07	0.05	-1.31	-1.13
14	10	8	22	15.432	0.07	0.04	-1.35	-1.17
14	10	10	24	15.442	0.06	0.04	-1.42	-1.24
14	10	12	26	15.460	0.04	0.03	-1.57	-1.39
14	10	14	28	15.462	0.04	0.03	-1.60	-1.42
14	10	16	30	15.477	0.02	0.02	-1.82	-1.64
14	10	18	32	15.469	0.03	0.02	-1.69	-1.51
14	10	20	34	15.465	0.03	0.02	-1.64	-1.46
14	10	22	36	15.463	0.04	0.02	-1.61	-1.43
14	10	24	38	15.463	0.04	0.02	-1.61	-1.43
14	10	26	40	15.476	0.02	0.02	-1.80	-1.62
14	10	28	42	15.467	0.03	0.02	-1.67	-1.49
14	10	30	44	15.469	0.03	0.02	-1.69	-1.51
14	10	32	46	15.482	0.02	0.01	-1.92	-1.74
14	10	34	48	15.479	0.02	0.01	-1.85	-1.67
14	10	36	50	15.471	0.03	0.02	-1.72	-1.54
14	10	38	52	15.473	0.03	0.02	-1.75	-1.57
14	10	40	54	15.475	0.02	0.02	-1.79	-1.61
14	10	42	56	15.502	-0.00	-0.00	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-13

DATE= 11/07/90

CASING DIAMETER= 4 INCHES
SAND DIAMETER= 8 INCHES
OPEN INTERVAL= 18.5 FEET
INITIAL WATER ABOVE TRANS.= 15.5 FEET

			WATER				
24-HR CLOCK TIME		ELAPSED	ABOVE	HEAD	HEAD	LOG	LOG
HOURS	MINUTES	SECONDS	TIME	TRANS.	(FEET)	RATIO	HEAD

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.53E-02 CM/SEC FALLING HEAD*

K= 1.61E-02 CM/SEC RISING HEAD**

OW-14

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-14

DATE= 11/06/90
 CASING DIAMETER= 5.93 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 30.99 FEET
 INITIAL WATER ABOVE TRANS.= 12.27 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
10	34	56	0	13.632	1.36	1.00	0	0.13
10	34	58	2	13.184	0.91	0.67	-0.17	-0.04
10	35	0	4	12.973	0.70	0.52	-0.29	-0.15
10	35	2	6	12.833	0.56	0.41	-0.38	-0.25
10	35	4	8	12.766	0.50	0.36	-0.44	-0.30
10	35	6	10	12.728	0.46	0.34	-0.47	-0.34
10	35	8	12	12.707	0.44	0.32	-0.49	-0.36
10	35	10	14	12.678	0.41	0.30	-0.52	-0.39
10	35	12	16	12.654	0.38	0.28	-0.55	-0.42
10	35	14	18	12.639	0.37	0.27	-0.57	-0.43
10	35	16	20	12.629	0.36	0.26	-0.58	-0.45
10	35	18	22	12.609	0.34	0.25	-0.60	-0.47
10	35	20	24	12.596	0.33	0.24	-0.62	-0.49
10	35	22	26	12.588	0.32	0.23	-0.63	-0.50
10	35	24	28	12.577	0.31	0.23	-0.65	-0.51
10	35	26	30	12.567	0.30	0.22	-0.66	-0.53
10	35	28	32	12.554	0.28	0.21	-0.68	-0.55
10	35	30	34	12.546	0.28	0.20	-0.69	-0.56
10	35	32	36	12.536	0.27	0.20	-0.71	-0.57
10	35	34	38	12.523	0.25	0.19	-0.73	-0.60
10	35	36	40	12.517	0.25	0.18	-0.74	-0.61
10	35	38	42	12.510	0.24	0.18	-0.75	-0.62
10	35	40	44	12.507	0.24	0.17	-0.76	-0.63
10	35	42	46	12.502	0.23	0.17	-0.77	-0.63
10	35	44	48	12.487	0.22	0.16	-0.80	-0.66
10	35	46	50	12.485	0.22	0.16	-0.80	-0.67
10	35	48	52	12.472	0.20	0.15	-0.83	-0.69
10	35	50	54	12.472	0.20	0.15	-0.83	-0.69
10	35	52	56	12.466	0.20	0.14	-0.84	-0.71
10	35	54	58	12.462	0.19	0.14	-0.85	-0.72
10	35	56	60	12.456	0.19	0.14	-0.87	-0.73
10	35	58	62	12.455	0.19	0.14	-0.87	-0.73
10	36	0	64	12.446	0.18	0.13	-0.89	-0.75
10	36	2	66	12.437	0.17	0.12	-0.91	-0.78

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-14

DATE= 11/06/90
 CASING DIAMETER= 5.93 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 30.99 FEET
 INITIAL WATER ABOVE TRANS.= 12.27 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		
10	36	4	68	12.436	0.17	0.12	-0.91	-0.78
10	36	6	70	12.423	0.15	0.11	-0.95	-0.82
10	36	8	72	12.424	0.15	0.11	-0.95	-0.81
10	36	10	74	12.419	0.15	0.11	-0.96	-0.83
10	36	12	76	12.411	0.14	0.10	-0.98	-0.85
10	36	14	78	12.405	0.14	0.10	-1.00	-0.87
10	36	16	80	12.399	0.13	0.09	-1.02	-0.89
10	36	25	89	12.383	0.11	0.08	-1.08	-0.95
10	36	30	94	12.373	0.10	0.08	-1.12	-0.99
10	36	35	99	12.368	0.10	0.07	-1.14	-1.01
10	36	40	104	12.345	0.08	0.06	-1.26	-1.12
10	36	45	109	12.344	0.07	0.05	-1.26	-1.13
10	36	50	114	12.347	0.08	0.06	-1.25	-1.12
10	36	55	119	12.325	0.06	0.04	-1.39	-1.26
10	37	0	124	12.317	0.05	0.03	-1.46	-1.33
10	37	5	129	12.319	0.05	0.04	-1.44	-1.31
10	37	10	134	12.309	0.04	0.03	-1.54	-1.40
10	37	15	139	12.300	0.03	0.02	-1.66	-1.53
10	37	20	144	12.288	0.02	0.01	-1.88	-1.74
10	37	25	149	12.282	0.01	0.01	-2.05	-1.91
10	37	30	154	12.275	0.01	0.00	-2.41	-2.27
10	37	35	159	12.275	0.01	0.00	-2.43	-2.29

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-14

DATE= 11/06/90
 CASING DIAMETER= 5.93 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 30.99 FEET
 INITIAL WATER ABOVE TRANS.= 12.27 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
10	40	2	0	10.883	1.39	1.00	**	0.00
10	40	4	2	11.395	0.87	0.63	-0.20	-0.06
10	40	6	4	11.654	0.62	0.44	-0.35	-0.21
10	40	8	6	11.863	0.41	0.29	-0.53	-0.39
10	40	10	8	12.004	0.27	0.19	-0.72	-0.58
10	40	12	10	12.088	0.18	0.13	-0.88	-0.74
10	40	14	12	12.148	0.12	0.09	**	-1.06
10	40	16	14	12.182	0.09	0.06	-1.20	-1.06
10	40	18	16	12.207	0.06	0.05	-1.34	-1.20
10	40	20	18	12.212	0.06	0.04	-1.38	-1.23
10	40	22	20	12.229	0.04	0.03	-1.53	-1.38
10	40	24	22	12.232	0.04	0.03	-1.57	-1.42
10	40	26	24	12.249	0.02	0.02	-1.82	-1.67
10	40	28	26	12.246	0.02	0.02	-1.77	-1.62
10	40	30	28	12.252	0.02	0.01	-1.89	-1.75
10	40	32	30	12.249	0.02	0.01	-1.83	-1.69
10	40	34	32	12.249	0.02	0.02	-1.82	-1.67
10	40	36	34	12.261	0.01	0.01	-2.18	-2.04
10	40	38	36	12.270	0.00	0.00	-3.50	-3.36
10	40	40	38	12.275	-0.00	-0.00	ERR	ERR
10	40	42	40	12.282	-0.01	-0.01	ERR	ERR
10	40	44	42	12.272	-0.00	-0.00	ERR	ERR
10	40	46	44	12.279	-0.01	-0.01	ERR	ERR
10	40	48	46	12.273	-0.00	-0.00	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-14

DATE= 11/06/90
CASING DIAMETER= 5.93 INCHES
SAND DIAMETER= 8 INCHES
OPEN INTERVAL= 30.99 FEET
INITIAL WATER ABOVE TRANS.= 12.27 FEET

24-HR CLOCK TIME	HOURS	MINUTES	SECONDS	ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO		
					(FEET)	HEAD (FEET)	HEAD RATIO	LOG HEAD	LOG HEAD	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 2.00E-02 CM/SEC FALLING HEAD*

K= 2.76E-02 CM/SEC RISING HEAD**

OW-17

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-17

DATE= 11/08/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	8.5 FEET
INITIAL WATER ABOVE TRANS.=		13.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		

FALLING HEAD TEST

13	19	42	0	14.795	1.19	1.00	0.00	0.08
13	19	44	2	14.471	0.87	0.73	-0.14	-0.06
13	19	46	4	14.224	0.62	0.52	-0.28	-0.21
13	19	48	6	14.359	0.76	0.63	-0.20	-0.12
13	19	50	8	14.046	0.45	0.37	-0.43	-0.35
13	19	52	10	14.360	0.76	0.64	-0.20	-0.12
13	19	54	12	14.191	0.59	0.49	-0.31	-0.23
13	19	56	14	14.147	0.55	0.46	-0.34	-0.26
13	19	58	16	13.832	0.23	0.19	-0.71	-0.63
13	20	0	18	14.004	0.40	0.34	-0.47	-0.39
13	20	2	20	14.080	0.48	0.40	-0.40	-0.32
13	20	4	22	13.736	0.14	0.11	-0.94	-0.87
13	20	6	24	13.901	0.30	0.25	-0.60	-0.52
13	20	8	26	13.936	0.34	0.28	-0.55	-0.47
13	20	10	28	13.852	0.25	0.21	-0.68	-0.60
13	20	12	30	13.748	0.15	0.12	-0.91	-0.83
13	20	14	32	13.904	0.30	0.25	-0.59	-0.52
13	20	16	34	13.672	0.07	0.06	-1.22	-1.14
13	20	18	36	13.974	0.37	0.31	-0.50	-0.43
13	20	20	38	13.982	0.38	0.32	-0.50	-0.42
13	20	22	40	13.733	0.13	0.11	-0.95	-0.88
13	20	24	42	13.727	0.13	0.11	-0.97	-0.90
13	20	26	44	13.983	0.38	0.32	-0.49	-0.42
13	20	28	46	13.664	0.06	0.05	-1.27	-1.20
13	20	30	48	13.621	0.02	0.02	-1.75	-1.67
13	20	32	50	13.994	0.39	0.33	-0.48	-0.40
13	20	34	52	13.740	0.14	0.12	-0.93	-0.86
13	20	36	54	13.716	0.12	0.10	-1.01	-0.94
13	20	38	56	13.637	0.04	0.03	-1.51	-1.43
13	20	40	58	13.619	0.02	0.02	-1.81	-1.73
13	20	42	60	13.971	0.37	0.31	-0.51	-0.43
13	20	44	62	14.038	0.44	0.37	-0.44	-0.36
13	20	46	64	13.659	0.06	0.05	-1.31	-1.23
13	20	54	72	13.827	0.23	0.19	-0.72	-0.64

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-17

DATE= 11/08/90

CASING DIAMETER= 4 INCHES

SAND DIAMETER= 12 INCHES

OPEN INTERVAL= 8.5 FEET

INITIAL WATER ABOVE TRANS.= 13.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
RISING HEAD TEST									
13	20	58	0	12.224	1.38	1.00	**	0.00	0.14
13	21	0	2	12.404	1.20	0.87		-0.06	0.08
13	21	2	4	12.820	0.78	0.57		-0.25	-0.11
13	21	4	6	12.729	0.87	0.63		-0.20	-0.06
13	21	6	8	12.933	0.67	0.48		-0.31	-0.18
13	21	8	10	12.910	0.69	0.50		-0.30	-0.16
13	21	10	12	13.287	0.31	0.23		-0.64	-0.50
13	21	12	14	13.115	0.49	0.35		-0.45	-0.31
13	21	14	16	13.150	0.45	0.33		-0.49	-0.35
13	21	16	18	13.407	0.19	0.14		-0.85	-0.71
13	21	18	20	13.509	0.09	0.07		-1.18	-1.04
13	21	20	22	13.315	0.29	0.21	**	-0.68	-0.54
13	21	22	24	13.438	0.16	0.12		-0.93	-0.79
13	21	24	26	13.507	0.09	0.07		-1.17	-1.03
13	21	26	28	13.407	0.19	0.14		-0.85	-0.71
13	21	28	30	13.668	-0.07	-0.05		ERR	ERR
13	21	30	32	13.507	0.09	0.07		-1.17	-1.03
13	21	32	34	13.659	-0.06	-0.04		ERR	ERR
13	21	34	36	13.481	0.12	0.09		-1.06	-0.92
13	21	36	38	13.533	0.07	0.05		-1.31	-1.18
13	21	38	40	13.627	-0.03	-0.02		ERR	ERR
13	21	40	42	13.545	0.06	0.04		-1.40	-1.26
13	21	42	44	13.527	0.07	0.05		-1.28	-1.14
13	21	44	46	13.591	0.01	0.01		-2.19	-2.05
13	21	46	48	13.636	-0.04	-0.03		ERR	ERR
13	21	48	50	13.894	-0.29	-0.21		ERR	ERR
13	21	50	52	13.563	0.04	0.03		-1.57	-1.43
13	21	52	54	13.919	-0.32	-0.23		ERR	ERR
13	21	54	56	13.640	-0.04	-0.03		ERR	ERR
13	21	56	58	13.752	-0.15	-0.11		ERR	ERR
13	21	58	60	13.863	-0.26	-0.19		ERR	ERR
13	22	0	62	13.681	-0.08	-0.06		ERR	ERR
13	22	2	64	13.591	0.01	0.01		-2.19	-2.05

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-17

DATE= 11/08/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	8.5 FEET
INITIAL WATER ABOVE TRANS.=		13.6 FEET

24-HR CLOCK TIME	ELAPSED TIME (SEC)	WATER			LOG	
		HOURS	MINUTES	SECONDS	ABOVE TRANS. (FEET)	HEAD (FEET)
-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.19E-02 CM/SEC FALLING HEAD*

K= 1.01E-02 CM/SEC RISING HEAD**

OW-18

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18

DATE= 11/07/90
 CASING DIAMETER= 6 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 35.0 FEET
 INITIAL WATER ABOVE TRANS.= 10.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD

FALLING HEAD TEST

17	16	0	0	11.644	0.94	1.00	*	0	-0.02516
17	16	2	2	11.606	0.91	0.96	-0.01764	-0.04281	
17	16	4	4	11.522	0.82	0.87	-0.05997	-0.08514	
17	16	6	6	11.484	0.78	0.83	-0.08029	-0.10546	
17	16	8	8	11.436	0.74	0.78	-0.10815	-0.13332	
17	16	10	10	11.402	0.70	0.74	-0.12852	-0.15369	
17	16	12	12	11.366	0.67	0.71	-0.15157	-0.17674	
17	16	14	14	11.335	0.64	0.67	*	-0.17193	-0.19710
17	16	16	16	11.296	0.60	0.63	-0.19951	-0.22467	
17	16	18	18	11.253	0.55	0.59	-0.23181	-0.25697	
17	16	20	20	11.237	0.54	0.57	-0.24480	-0.26997	
17	16	22	22	11.213	0.51	0.54	-0.26452	-0.28968	
17	16	24	24	11.200	0.50	0.53	-0.27612	-0.30128	
17	16	26	26	11.170	0.47	0.50	-0.30306	-0.32822	
17	16	28	28	11.145	0.44	0.47	-0.32693	-0.35210	
17	16	30	30	11.135	0.43	0.46	-0.33669	-0.36185	
17	16	32	32	11.120	0.42	0.44	-0.35197	-0.37714	
17	16	34	34	11.095	0.39	0.42	-0.37854	-0.40371	
17	16	36	36	11.084	0.38	0.41	-0.39052	-0.41568	
17	16	38	38	11.063	0.36	0.39	-0.41448	-0.43964	
17	16	40	40	11.063	0.36	0.39	-0.41448	-0.43964	
17	16	42	42	11.034	0.33	0.35	-0.45170	-0.47686	
17	16	44	44	11.028	0.33	0.35	-0.45903	-0.48419	
17	16	46	46	11.017	0.32	0.34	-0.47348	-0.49865	
17	16	48	48	11.024	0.32	0.34	-0.46417	-0.48934	
17	16	50	50	11.014	0.31	0.33	-0.47732	-0.50248	
17	16	52	52	11.006	0.31	0.32	-0.48843	-0.51360	
17	16	54	54	10.985	0.28	0.30	-0.52030	-0.54547	
17	16	56	56	10.975	0.27	0.29	-0.53597	-0.56113	
17	16	58	58	10.977	0.28	0.29	-0.53158	-0.55674	
17	17	0	60	10.978	0.28	0.29	-0.53091	-0.55607	
17	17	2	62	10.961	0.26	0.28	-0.55825	-0.58342	
17	17	4	64	10.960	0.26	0.28	-0.55933	-0.58449	
17	17	6	66	10.957	0.26	0.27	-0.56510	-0.59026	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18

DATE= 11/07/90
 CASING DIAMETER= 6 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 35.0 FEET
 INITIAL WATER ABOVE TRANS.= 10.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO		
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO	LOG HEAD	LOG HEAD	
17	17	8	68	10.964	0.26	0.28	-0.55363	-0.57880	
17	17	10	70	10.955	0.26	0.27	-0.56764	-0.59281	
17	17	12	72	10.939	0.24	0.25	-0.59593	-0.62110	
17	17	14	74	10.940	0.24	0.25	-0.59515	-0.62032	
17	17	16	76	10.940	0.24	0.25	-0.59437	-0.61954	
17	17	18	78	10.930	0.23	0.24	-0.61383	-0.63900	
17	17	20	80	10.929	0.23	0.24	-0.61505	-0.64022	
17	17	22	82	10.944	0.24	0.26	-0.58782	-0.61299	
17	17	24	84	10.941	0.24	0.26	-0.59282	-0.61799	
17	17	26	86	10.941	0.24	0.26	-0.59282	-0.61799	
17	17	28	88	10.925	0.23	0.24	-0.62203	-0.64719	
17	17	30	90	10.922	0.22	0.24	-0.62828	-0.65345	
17	17	32	92	10.923	0.22	0.24	-0.62660	-0.65177	
17	17	34	94	10.934	0.23	0.25	-0.60538	-0.63055	
17	17	36	96	10.912	0.21	0.22	-0.64803	-0.67320	
17	17	38	98	10.932	0.23	0.25	-0.61019	-0.63536	
17	17	40	100	10.912	0.21	0.22	-0.64891	-0.67408	
17	17	42	102	10.915	0.21	0.23	-0.64323	-0.66839	
17	17	44	104	10.917	0.22	0.23	-0.63933	-0.66450	
17	18	58	178	10.906	0.21	0.22	-0.66097	-0.68613	
17	19	0	180	10.887	0.19	0.20	-0.70274	-0.72791	
17	19	2	182	10.885	0.19	0.20	-0.70675	-0.73192	
17	19	4	184	10.885	0.18	0.20	-0.70826	-0.73343	
17	19	6	186	10.841	0.14	0.15	-0.82512	-0.85029	
17	19	8	188	10.893	0.19	0.20	-0.68998	-0.71514	
17	19	18	198	10.894	0.19	0.21	-0.68805	-0.71321	
17	19	20	200	10.898	0.20	0.21	-0.67757	-0.70274	
17	19	22	202	10.893	0.19	0.20	-0.68853	-0.71369	
17	19	24	204	10.874	0.17	0.18	-0.73426	-0.75943	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18

DATE= 11/07/90
 CASING DIAMETER= 6 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 35.0 FEET
 INITIAL WATER ABOVE TRANS.= 10.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO		
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO	LOG HEAD		
RISING HEAD TEST									
17	19	34	0	10.027	0.67	1.00	**	0	-0.17200
17	19	36	2	10.073	0.63	0.93	-0.03085	-0.20286	
17	19	38	4	10.100	0.60	0.89	-0.04955	-0.22155	
17	19	40	6	10.137	0.56	0.84	-0.07728	-0.24928	
17	19	42	8	10.173	0.53	0.78	-0.10620	-0.27820	
17	19	44	10	10.214	0.49	0.72	-0.14119	-0.31319	
17	19	46	12	10.248	0.45	0.67	-0.17281	-0.34481	
17	19	48	14	10.253	0.45	0.66	-0.17779	-0.34979	
17	19	50	16	10.281	0.42	0.62	-0.20624	-0.37824	
17	19	52	18	10.309	0.39	0.58	-0.23621	-0.40821	
17	19	54	20	10.332	0.37	0.55	-0.26202	-0.43402	
17	19	56	22	10.349	0.35	0.52	-0.28304	-0.45504	
17	19	58	24	10.400	0.30	0.45	-0.35112	-0.52312	
17	20	0	26	10.392	0.31	0.46	-0.34007	-0.51207	
17	20	2	28	10.412	0.29	0.43	-0.36922	-0.54122	
17	20	4	30	10.429	0.27	0.40	**	-0.39527	-0.56727
17	20	6	32	10.445	0.25	0.38	-0.42152	-0.59353	
17	20	8	34	10.454	0.25	0.37	-0.43716	-0.60916	
17	20	10	36	10.470	0.23	0.34	-0.46536	-0.63736	
17	20	12	38	10.479	0.22	0.33	-0.48353	-0.65553	
17	20	14	40	10.494	0.21	0.31	-0.51456	-0.68657	
17	20	16	42	10.506	0.19	0.29	-0.54119	-0.71319	
17	20	18	44	10.545	0.16	0.23	-0.63732	-0.80932	
17	20	20	46	10.530	0.17	0.25	-0.59661	-0.76861	
17	20	22	48	10.567	0.13	0.20	-0.70411	-0.87611	
17	20	24	50	10.543	0.16	0.23	-0.63075	-0.80275	
17	20	26	52	10.581	0.12	0.18	-0.75382	-0.92582	
17	20	28	54	10.565	0.14	0.20	-0.69647	-0.86847	
17	20	30	56	10.596	0.10	0.15	-0.80996	-0.98196	
17	20	32	58	10.572	0.13	0.19	-0.71981	-0.89181	
17	20	34	60	10.609	0.09	0.14	-0.86929	-1.04129	
17	20	36	62	10.590	0.11	0.16	-0.78645	-0.95846	
17	20	38	64	10.617	0.08	0.12	-0.91125	-1.08325	
17	20	40	66	10.598	0.10	0.15	-0.81900	-0.99100	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18

DATE= 11/07/90
 CASING DIAMETER= 6 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 35.0 FEET
 INITIAL WATER ABOVE TRANS.= 10.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		TIME (FEET)	HEAD (FEET)	HEAD RATIO			
17	20	42	68	10.603	0.10	0.14	-0.84342	-1.01542	
17	20	44	70	10.601	0.10	0.15	-0.83386	-1.00586	
17	20	46	72	10.610	0.09	0.13	-0.87238	-1.04438	
17	20	48	74	10.615	0.09	0.13	-0.89790	-1.06990	
17	20	50	76	10.615	0.08	0.13	-0.89900	-1.07100	
17	20	52	78	10.622	0.08	0.12	-0.93325	-1.10525	
17	20	54	80	10.657	0.04	0.06	-1.19184	-1.36385	
17	20	56	82	10.631	0.07	0.10	-0.98761	-1.15961	
17	20	58	84	10.654	0.05	0.07	-1.16672	-1.33873	
17	21	0	86	10.660	0.04	0.06	-1.23012	-1.40212	
17	21	2	88	10.640	0.06	0.09	-1.05131	-1.22331	
17	21	4	90	10.640	0.06	0.09	-1.04975	-1.22175	
17	21	6	92	10.641	0.06	0.09	-1.05601	-1.22801	
17	21	8	94	10.638	0.06	0.09	-1.03299	-1.20499	
17	21	10	96	10.646	0.05	0.08	-1.09732	-1.26932	
17	21	12	98	10.652	0.05	0.07	-1.14298	-1.31498	
17	21	14	100	10.644	0.06	0.08	-1.08199	-1.25399	
17	21	16	102	10.671	0.03	0.04	-1.37061	-1.54262	
17	21	18	104	10.652	0.05	0.07	-1.14298	-1.31498	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18

DATE= 11/07/90
CASING DIAMETER= 6 INCHES
SAND DIAMETER= 12 INCHES
OPEN INTERVAL= 35.0 FEET
INITIAL WATER ABOVE TRANS.= 10.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD (FEET)	HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	(FEET)	HEAD				
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 3.27E-03 CM/SEC FALLING HEAD*

K= 3.51E-03 CM/SEC RISING HEAD**

OW-18A

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18A

DATE= 11/07/90
 CASING DIAMETER= 8.34 INCHES
 SAND DIAMETER= 12.25 INCHES
 OPEN INTERVAL= 7.42 FEET
 INITIAL WATER ABOVE TRANS.= 6.78 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	(FEET)			
FALLING HEAD TEST								
17	4	56	0	7.412	0.63	1.00	0.00	-0.20
17	4	58	2	7.037	0.26	0.41	-0.39	-0.59
17	5	0	4	6.923	0.14	0.23	-0.65	-0.84
17	5	2	6	6.880	0.10	0.16	-0.80	-1.00
17	5	4	8	6.858	0.08	0.12	-0.91	-1.11
17	5	6	10	6.839	0.06	0.09	-1.03	-1.23
17	5	8	12	6.823	0.04	0.07	-1.17	-1.37
17	5	10	14	6.805	0.03	0.04	-1.40	-1.60
17	5	12	16	6.806	0.03	0.04	-1.39	-1.59
17	5	14	18	6.802	0.02	0.03	-1.46	-1.66
17	5	16	20	6.799	0.02	0.03	-1.53	-1.73
17	5	18	22	6.793	0.01	0.02	-1.69	-1.88
17	5	20	24	6.792	0.01	0.02	-1.71	-1.91
17	5	22	26	6.788	0.01	0.01	-1.92	-2.12
17	5	24	28	6.780	-0.00	-0.00	ERR	ERR
17	5	26	30	6.795	0.02	0.02	-1.61	-1.81
17	5	28	32	6.790	0.01	0.02	-1.81	-2.01
17	5	30	34	6.779	-0.00	-0.00	ERR	ERR
17	5	32	36	6.781	0.00	0.00	-2.90	-3.10
17	5	34	38	6.777	-0.00	-0.00	ERR	ERR
17	5	36	40	6.790	0.01	0.02	-1.79	-1.99
17	5	38	42	6.782	0.00	0.00	-2.58	-2.78
17	5	40	44	6.776	-0.00	-0.01	ERR	ERR
17	5	42	46	6.777	-0.00	-0.01	ERR	ERR
17	5	44	48	6.778	-0.00	-0.00	ERR	ERR
17	5	46	50	6.778	-0.00	-0.00	ERR	ERR
17	5	48	52	6.778	-0.00	-0.00	ERR	ERR
17	5	56	60	6.778	-0.00	-0.00	ERR	ERR
17	5	58	62	6.781	0.00	0.00	-2.64	-2.84
17	6	0	64	6.781	0.00	0.00	-2.90	-3.10
17	6	2	66	5.630	-1.15	-1.82	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18A

DATE= 11/07/90

CASING	DIAMETER=	8.34	INCHES
SAND	DIAMETER=	12.25	INCHES
OPEN	INTERVAL=	7.42	FEET
INITIAL WATER ABOVE TRANS.=		6.78	FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG		
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD	
RISING HEAD TEST									
17	6	4	0	6.198	0.58	1.00	**	0.00	-0.24
17	6	6	2	6.505	0.28	0.47		-0.33	-0.56
17	6	8	4	6.637	0.14	0.25		-0.61	-0.85
17	6	10	6	6.693	0.09	0.15		-0.83	-1.06
17	6	12	8	6.725	0.05	0.09	**	-1.03	-1.26
17	6	14	10	6.745	0.03	0.06		-1.23	-1.46
17	6	16	12	6.758	0.02	0.04		-1.41	-1.65
17	6	18	14	6.760	0.02	0.03		-1.46	-1.70
17	6	20	16	6.772	0.01	0.01		-1.86	-2.10
17	6	22	18	6.766	0.01	0.02		-1.63	-1.87
17	6	24	20	6.777	0.00	0.00		-2.34	-2.58
17	6	26	22	6.780	0.00	0.00		-3.32	-3.56
17	6	28	24	6.779	0.00	0.00		-2.63	-2.87
17	6	30	26	6.782	-0.00	-0.00	ERR	ERR	
17	6	32	28	6.786	-0.01	-0.01	ERR	ERR	
17	6	34	30	6.784	-0.00	-0.01	ERR	ERR	
17	6	36	32	6.783	-0.00	-0.00	ERR	ERR	
17	6	38	34	6.785	-0.01	-0.01	ERR	ERR	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-18A

DATE= 11/07/90
CASING DIAMETER= 8.34 INCHES
SAND DIAMETER= 12.25 INCHES
OPEN INTERVAL= 7.42 FEET
INITIAL WATER ABOVE TRANS.= 6.78 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.22E-01 CM/SEC FALLING HEAD*

K= 1.96E-01 CM/SEC RISING HEAD**

OW-19

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE= 11/08/90

CASING	DIAMETER=	6 INCHES
SAND	DIAMETER=	12.25 INCHES
OPEN	INTERVAL=	21.5 FEET
INITIAL WATER ABOVE TRANS.=		15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		

FALLING HEAD TEST

12	54	21	0	16.829	0.93	1.00	0.00	-0.03
12	54	22	1	16.607	0.71	0.76	-0.12	-0.15
12	54	23	2	16.757	0.86	0.92	-0.04	-0.07
12	54	24	3	16.715	0.81	0.88	-0.06	-0.09
12	54	25	4	16.447	0.55	0.59	-0.23	-0.26
12	54	26	5	16.546	0.65	0.69	-0.16	-0.19
12	54	27	6	16.436	0.54	0.58	-0.24	-0.27
12	54	28	7	16.468	0.57	0.61	-0.21	-0.25
12	54	29	8	16.395	0.49	0.53	-0.27	-0.31
12	54	30	9	16.432	0.53	0.57	-0.24	-0.27
12	54	31	10	16.556	0.66	0.71	-0.15	-0.18
12	54	32	11	16.381	0.48	0.52	-0.29	-0.32
12	54	33	12	16.568	0.67	0.72	-0.14	-0.18
12	54	34	13	16.514	0.61	0.66	-0.18	-0.21
12	54	35	14	16.289	0.39	0.42	-0.38	-0.41
12	54	36	15	16.499	0.60	0.64	-0.19	-0.22
12	54	37	16	16.467	0.57	0.61	-0.21	-0.25
12	54	38	17	16.515	0.61	0.66	-0.18	-0.21
12	54	39	18	16.286	0.39	0.42	-0.38	-0.41
12	54	40	19	16.319	0.42	0.45	-0.35	-0.38
12	54	41	20	16.291	0.39	0.42	-0.38	-0.41
12	54	42	21	16.350	0.45	0.48	-0.31	-0.35
12	54	43	22	16.475	0.57	0.62	-0.21	-0.24
12	54	44	23	16.308	0.41	0.44	-0.36	-0.39
12	54	45	24	16.245	0.35	0.37	-0.43	-0.46
12	54	46	25	16.210	0.31	0.33	-0.48	-0.51
12	54	47	26	16.374	0.47	0.51	-0.29	-0.32
12	54	48	27	16.197	0.30	0.32	-0.50	-0.53
12	54	49	28	16.351	0.45	0.49	-0.31	-0.35
12	54	50	29	16.379	0.48	0.52	-0.29	-0.32
12	54	51	30	16.346	0.45	0.48	-0.32	-0.35
12	54	52	31	16.354	0.45	0.49	-0.31	-0.34
12	54	53	32	16.432	0.53	0.57	-0.24	-0.27
12	54	54	33	16.175	0.27	0.30	-0.53	-0.56

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE= 11/08/90

CASING DIAMETER= 6 INCHES
 SAND DIAMETER= 12.25 INCHES
 OPEN INTERVAL= 21.5 FEET
 INITIAL WATER ABOVE TRANS.= 15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
12	54	55	34	16.405	0.50	0.54	-0.27	-0.30
12	54	56	35	16.219	0.32	0.34	-0.46	-0.50
12	54	57	36	16.070	0.17	0.18	-0.74	-0.77
12	54	58	37	16.297	0.40	0.43	-0.37	-0.40
12	54	59	38	16.205	0.31	0.33	-0.48	-0.52
12	55	0	39	16.360	0.46	0.49	-0.31	-0.34
12	55	1	40	16.195	0.29	0.32	-0.50	-0.53
12	55	2	41	16.202	0.30	0.33	-0.49	-0.52
12	55	3	42	16.310	0.41	0.44	-0.36	-0.39
12	55	4	43	16.111	0.21	0.23	-0.64	-0.68
12	55	5	44	16.061	0.16	0.17	-0.76	-0.79
12	55	6	45	16.230	0.33	0.36	-0.45	-0.48
12	55	7	46	16.100	0.20	0.21	-0.67	-0.70
12	55	8	47	16.282	0.38	0.41	-0.39	-0.42
12	55	9	48	16.151	0.25	0.27	-0.57	-0.60
12	55	10	49	16.048	0.15	0.16	-0.80	-0.83
12	55	11	50	16.264	0.36	0.39	-0.41	-0.44
12	55	12	51	16.000	0.10	0.11	-0.97	-1.00
12	55	13	52	16.204	0.30	0.33	-0.49	-0.52
12	55	14	53	16.099	0.20	0.21	-0.67	-0.70
12	55	15	54	15.935	0.03	0.04	-1.43	-1.46
12	55	16	55	16.183	0.28	0.31	-0.52	-0.55
12	55	17	56	15.957	0.06	0.06	-1.21	-1.24
12	55	18	57	16.009	0.11	0.12	-0.93	-0.96
12	55	19	58	16.101	0.20	0.22	-0.66	-0.70
12	55	20	59	16.144	0.24	0.26	-0.58	-0.61
12	55	21	60	16.242	0.34	0.37	-0.43	-0.47
12	55	22	61	15.967	0.07	0.07	-1.14	-1.17
12	55	23	62	16.011	0.11	0.12	-0.92	-0.96
12	55	24	63	16.013	0.11	0.12	-0.91	-0.95
12	55	25	64	16.035	0.14	0.15	-0.84	-0.87
12	55	26	65	16.082	0.18	0.20	-0.71	-0.74
12	55	27	66	16.038	0.14	0.15	-0.83	-0.86
12	55	28	67	16.052	0.15	0.16	-0.79	-0.82
12	55	29	68	16.117	0.22	0.23	-0.63	-0.66

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE= 11/08/90

CASING	DIAMETER=	6 INCHES
SAND	DIAMETER=	12.25 INCHES
OPEN	INTERVAL=	21.5 FEET
INITIAL WATER ABOVE TRANS.=		15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
12	55	30	69	16.220	0.32	0.34	-0.46	-0.49
12	55	31	70	15.983	0.08	0.09	-1.05	-1.08
12	55	32	71	16.021	0.12	0.13	-0.89	-0.92
12	55	33	72	16.123	0.22	0.24	-0.62	-0.65
12	55	34	73	16.055	0.15	0.17	-0.78	-0.81
12	55	35	74	15.946	0.05	0.05	-1.31	-1.34
12	55	36	75	16.000	0.10	0.11	-0.97	-1.00
12	55	37	76	15.895	-0.01	-0.01	ERR	ERR
12	55	38	77	16.158	0.26	0.28	-0.56	-0.59
12	55	39	78	16.081	0.18	0.19	-0.71	-0.74
12	55	40	79	16.028	0.13	0.14	-0.86	-0.89
12	55	41	80	16.071	0.17	0.18	-0.74	-0.77
12	55	42	81	15.980	0.08	0.09	-1.07	-1.10
12	55	43	82	16.219	0.32	0.34	-0.46	-0.50
12	55	44	83	15.935	0.03	0.04	-1.43	-1.46
12	55	45	84	15.956	0.06	0.06	-1.22	-1.25
12	55	46	85	16.108	0.21	0.22	-0.65	-0.68
12	55	47	86	16.011	0.11	0.12	-0.92	-0.95
12	55	48	87	15.970	0.07	0.08	-1.12	-1.15
12	55	49	88	15.945	0.04	0.05	-1.32	-1.35
12	55	50	89	16.102	0.20	0.22	-0.66	-0.70
12	55	51	90	15.982	0.08	0.09	-1.06	-1.09
12	55	52	91	15.822	-0.08	-0.08	ERR	ERR
12	55	53	92	16.008	0.11	0.12	-0.93	-0.97
12	55	54	93	16.081	0.18	0.20	-0.71	-0.74
12	55	55	94	16.081	0.18	0.20	-0.71	-0.74
12	55	56	95	16.078	0.18	0.19	-0.72	-0.75
12	55	57	96	15.846	-0.05	-0.06	ERR	ERR
12	55	58	97	16.199	0.30	0.32	-0.49	-0.52
12	55	59	98	16.125	0.22	0.24	-0.62	-0.65
12	56	0	99	16.014	0.11	0.12	-0.91	-0.94
12	56	1	100	16.121	0.22	0.24	-0.62	-0.66
12	56	2	101	15.989	0.09	0.10	-1.02	-1.05
12	56	3	102	15.901	0.00	0.00	-3.10	-3.13
12	56	4	103	15.990	0.09	0.10	-1.02	-1.05

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE- 11/08/90

CASING DIAMETER- 6 INCHES
 SAND DIAMETER- 12.25 INCHES
 OPEN INTERVAL- 21.5 FEET
 INITIAL WATER ABOVE TRANS.- 15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
12	56	5	104	16.030	0.13	0.14	-0.85	-0.89
12	56	6	105	15.921	0.02	0.02	-1.64	-1.67
12	56	7	106	15.999	0.10	0.11	-0.97	-1.01
12	56	8	107	15.994	0.09	0.10	-0.99	-1.03
12	56	9	108	16.169	0.27	0.29	-0.54	-0.57
12	56	10	109	16.093	0.19	0.21	-0.68	-0.71
12	56	11	110	15.892	-0.01	-0.01	ERR	ERR
12	56	12	111	16.064	0.16	0.18	-0.75	-0.78
12	56	13	112	16.125	0.23	0.24	-0.62	-0.65
12	56	14	113	15.940	0.04	0.04	-1.36	-1.39
12	56	15	114	15.976	0.08	0.08	-1.08	-1.12
12	56	16	115	15.910	0.01	0.01	-1.96	-1.99
12	56	17	116	15.867	-0.03	-0.04	ERR	ERR
12	56	18	117	15.904	0.00	0.00	-2.35	-2.38
12	56	19	118	16.009	0.11	0.12	-0.93	-0.96
12	56	20	119	15.895	-0.00	-0.00	ERR	ERR
12	56	21	120	16.012	0.11	0.12	-0.92	-0.95
12	56	22	121	15.890	-0.01	-0.01	ERR	ERR
12	56	23	122	16.139	0.24	0.26	-0.59	-0.62
12	56	24	123	16.195	0.30	0.32	-0.50	-0.53
12	56	25	124	16.029	0.13	0.14	-0.86	-0.89
12	56	26	125	15.881	-0.02	-0.02	ERR	ERR
12	56	27	126	16.013	0.11	0.12	-0.92	-0.95
12	56	28	127	15.980	0.08	0.09	-1.06	-1.10
12	56	29	128	16.080	0.18	0.19	-0.71	-0.75
12	56	30	129	16.147	0.25	0.27	-0.58	-0.61
12	56	31	130	15.955	0.06	0.06	-1.23	-1.26
12	56	32	131	15.914	0.01	0.02	-1.81	-1.84
12	56	33	132	16.138	0.24	0.26	-0.59	-0.62
12	56	34	133	16.073	0.17	0.19	-0.73	-0.76
12	56	35	134	15.986	0.09	0.09	-1.04	-1.07
12	56	36	135	15.984	0.08	0.09	-1.04	-1.07
12	56	51.5	150.5	16.032	0.13	0.14	-0.85	-0.88
12	56	52.5	151.5	16.044	0.14	0.15	-0.81	-0.84
12	56	53.5	152.5	16.019	0.12	0.13	-0.89	-0.92

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE- 11/08/90
 CASING DIAMETER- 6 INCHES
 SAND DIAMETER- 12.25 INCHES
 OPEN INTERVAL- 21.5 FEET
 INITIAL WATER ABOVE TRANS.- 15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
12	56	54.5	153.5	16.000	0.10	0.11	-0.97	-1.00	
12	56	55.5	154.5	15.971	0.07	0.08	-1.11	-1.15	
12	56	56.5	155.5	16.072	0.17	0.18	-0.73	-0.77	
12	56	57.5	156.5	16.105	0.20	0.22	-0.66	-0.69	
12	56	58.5	157.5	16.260	0.36	0.39	-0.41	-0.44	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE= 11/08/90

CASING DIAMETER= 6 INCHES

SAND DIAMETER= 12.25 INCHES

OPEN INTERVAL= 21.5 FEET

INITIAL WATER ABOVE TRANS.= 15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
RISING HEAD TEST									
12	57	3.5	0	15.031	0.87	1.00	**	0.00	-0.06
12	57	4.5	1	15.431	0.47	0.54		-0.27	-0.33
12	57	5.5	2	15.403	0.50	0.57		-0.24	-0.30
12	57	6.5	3	15.369	0.53	0.61		-0.21	-0.28
12	57	7.5	4	15.462	0.44	0.50		-0.30	-0.36
12	57	8.5	5	15.309	0.59	0.68		-0.17	-0.23
12	57	9.5	6	15.354	0.55	0.63		-0.20	-0.26
12	57	10.5	7	15.516	0.38	0.44		-0.35	-0.42
12	57	11.5	8	15.325	0.57	0.66		-0.18	-0.24
12	57	12.5	9	15.191	0.71	0.82		-0.09	-0.15
12	57	13.5	10	15.415	0.48	0.56		-0.25	-0.31
12	57	14.5	11	15.397	0.50	0.58		-0.24	-0.30
12	57	15.5	12	15.414	0.49	0.56		-0.25	-0.31
12	57	16.5	13	15.373	0.53	0.61		-0.22	-0.28
12	57	17.5	14	15.675	0.22	0.26		-0.59	-0.65
12	57	18.5	15	15.404	0.50	0.57		-0.24	-0.30
12	57	19.5	16	15.496	0.40	0.46		-0.33	-0.39
12	57	20.5	17	15.499	0.40	0.46		-0.34	-0.40
12	57	21.5	18	15.576	0.32	0.37		-0.43	-0.49
12	57	22.5	19	15.485	0.42	0.48		-0.32	-0.38
12	57	23.5	20	15.453	0.45	0.51		-0.29	-0.35
12	57	24.5	21	15.528	0.37	0.43		-0.37	-0.43
12	57	25.5	22	15.709	0.19	0.22		-0.66	-0.72
12	57	26.5	23	15.390	0.51	0.59	**	-0.23	-0.29
12	57	27.5	24	15.669	0.23	0.27		-0.58	-0.64
12	57	28.5	25	15.528	0.37	0.43		-0.37	-0.43
12	57	29.5	26	15.688	0.21	0.24		-0.61	-0.67
12	57	30.5	27	15.573	0.33	0.38		-0.42	-0.49
12	57	31.5	28	15.468	0.43	0.50		-0.30	-0.36
12	57	32.5	29	15.669	0.23	0.27		-0.57	-0.64
12	57	33.5	30	15.591	0.31	0.36		-0.45	-0.51
12	57	34.5	31	15.683	0.22	0.25		-0.60	-0.66
12	57	35.5	32	15.808	0.09	0.11		-0.97	-1.03
12	57	36.5	33	15.472	0.43	0.49		-0.31	-0.37

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE= 11/08/90
 CASING DIAMETER= 6 INCHES
 SAND DIAMETER= 12.25 INCHES
 OPEN INTERVAL= 21.5 FEET
 INITIAL WATER ABOVE TRANS.= 15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD (FEET)	HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)				
12	57	37.5	34	15.751	0.15	0.17	-0.77	-0.83	
12	57	38.5	35	15.839	0.06	0.07	-1.15	-1.22	
12	57	39.5	36	15.857	0.04	0.05	-1.30	-1.37	
12	57	40.5	37	15.625	0.27	0.32	-0.50	-0.56	
12	57	41.5	38	15.645	0.25	0.29	-0.53	-0.59	
12	57	42.5	39	15.851	0.05	0.06	-1.25	-1.31	
12	57	43.5	40	15.638	0.26	0.30	-0.52	-0.58	
12	57	44.5	41	15.613	0.29	0.33	-0.48	-0.54	
12	57	45.5	42	15.645	0.25	0.29	-0.53	-0.59	
12	57	46.5	43	15.794	0.11	0.12	-0.91	-0.98	
12	57	47.5	44	15.689	0.21	0.24	-0.61	-0.67	
12	57	48.5	45	15.667	0.23	0.27	-0.57	-0.63	
12	57	49.5	46	15.748	0.15	0.18	-0.76	-0.82	
12	57	50.5	47	15.874	0.03	0.03	-1.53	-1.59	
12	57	51.5	48	15.700	0.20	0.23	-0.64	-0.70	
12	57	52.5	49	15.728	0.17	0.20	-0.70	-0.77	
12	57	53.5	50	15.795	0.10	0.12	-0.92	-0.98	
12	57	54.5	51	15.721	0.18	0.21	-0.69	-0.75	
12	57	55.5	52	15.786	0.11	0.13	-0.88	-0.94	
12	57	56.5	53	15.900	-0.00	-0.00	ERR	ERR	
12	57	57.5	54	15.922	-0.02	-0.03	ERR	ERR	
12	57	58.5	55	15.769	0.13	0.15	-0.82	-0.88	
12	57	59.5	56	15.898	0.00	0.00	-2.58	-2.64	
12	58	0.5	57	15.928	-0.03	-0.03	ERR	ERR	
12	58	1.5	58	16.031	-0.13	-0.15	ERR	ERR	
12	58	2.5	59	15.695	0.20	0.24	-0.63	-0.69	
12	58	3.5	60	15.799	0.10	0.12	-0.94	-1.00	
12	58	4.5	61	15.855	0.05	0.05	-1.28	-1.34	
12	58	5.5	62	15.702	0.20	0.23	-0.64	-0.70	
12	58	6.5	63	15.942	-0.04	-0.05	ERR	ERR	
12	58	7.5	64	15.998	-0.10	-0.11	ERR	ERR	
12	58	8.5	65	15.825	0.07	0.09	-1.07	-1.13	
12	58	9.5	66	15.717	0.18	0.21	-0.68	-0.74	
12	58	10.5	67	15.852	0.05	0.06	-1.26	-1.32	
12	58	11.5	68	15.970	-0.07	-0.08	ERR	ERR	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE= 11/08/90

CASING DIAMETER= 6 INCHES

SAND DIAMETER= 12.25 INCHES

OPEN INTERVAL= 21.5 FEET

INITIAL WATER ABOVE TRANS.= 15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
12	58	12.5	69	16.033	-0.13	-0.15	ERR	ERR
12	58	13.5	70	15.802	0.10	0.11	-0.95	-1.01
12	58	14.5	71	15.979	-0.08	-0.09	ERR	ERR
12	58	15.5	72	16.071	-0.17	-0.20	ERR	ERR
12	58	16.5	73	15.993	-0.09	-0.11	ERR	ERR
12	58	17.5	74	15.893	0.01	0.01	-2.07	-2.13
12	58	18.5	75	15.800	0.10	0.11	-0.94	-1.00
12	58	19.5	76	15.973	-0.07	-0.08	ERR	ERR
12	58	20.5	77	16.087	-0.19	-0.22	ERR	ERR
12	58	21.5	78	15.925	-0.02	-0.03	ERR	ERR
12	58	22.5	79	15.822	0.08	0.09	-1.05	-1.11
12	58	23.5	80	16.035	-0.14	-0.16	ERR	ERR
12	58	24.5	81	16.011	-0.11	-0.13	ERR	ERR
12	58	25.5	82	15.819	0.08	0.09	-1.03	-1.09
12	58	26.5	83	16.012	-0.11	-0.13	ERR	ERR
12	58	27.5	84	15.862	0.04	0.04	-1.36	-1.42
12	58	28.5	85	16.004	-0.10	-0.12	ERR	ERR
12	58	29.5	86	16.060	-0.16	-0.18	ERR	ERR
12	58	30.5	87	16.003	-0.10	-0.12	ERR	ERR
12	58	31.5	88	15.794	0.11	0.12	-0.91	-0.97
12	58	32.5	89	15.895	0.01	0.01	-2.24	-2.30
12	58	33.5	90	15.839	0.06	0.07	-1.15	-1.22
12	58	34.5	91	16.002	-0.10	-0.12	ERR	ERR
12	58	35.5	92	15.858	0.04	0.05	-1.32	-1.38
12	58	36.5	93	15.793	0.11	0.12	-0.91	-0.97
12	58	37.5	94	16.074	-0.17	-0.20	ERR	ERR
12	58	38.5	95	16.084	-0.18	-0.21	ERR	ERR
12	58	39.5	96	15.845	0.06	0.06	-1.20	-1.26
12	58	40.5	97	15.905	-0.01	-0.01	ERR	ERR
12	58	41.5	98	15.912	-0.01	-0.01	ERR	ERR
12	58	42.5	99	15.715	0.19	0.21	-0.67	-0.73
12	58	43.5	100	15.911	-0.01	-0.01	ERR	ERR
12	58	44.5	101	15.885	0.01	0.02	-1.76	-1.83
12	58	45.5	102	16.105	-0.21	-0.24	ERR	ERR
12	58	46.5	103	16.036	-0.14	-0.16	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE- 11/08/90
CASING DIAMETER- 6 INCHES
SAND DIAMETER- 12.25 INCHES
OPEN INTERVAL- 21.5 FEET
INITIAL WATER ABOVE TRANS.- 15.9 FEET

24-HR CLOCK TIME	HOURS	MINUTES	SECONDS	WATER			LOG		
				ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD LOG RATIO	LOG HEAD
				-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 4.02E-03 CM/SEC FALLING HEAD*

K= 3.83E-03 CM/SEC RISING HEAD

OW-19A

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19A

DATE= 11/08/90

CASING	DIAMETER=	5.93 INCHES
SAND	DIAMETER=	8 INCHES
OPEN	INTERVAL=	36.83 FEET
INITIAL WATER ABOVE TRANS.=		15.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			

FALLING HEAD TEST

12	41	2	0	16.911	1.21	1.00	*	0.00	0.08
12	41	3	1	16.008	0.31	0.25	-	-0.60	-0.51
12	41	4	2	16.142	0.44	0.37	-	-0.44	-0.35
12	41	5	3	15.818	0.12	0.10	-	-1.01	-0.93
12	41	6	4	15.814	0.11	0.09	-	-1.03	-0.94
12	41	7	5	15.758	0.06	0.05	-	-1.32	-1.24
12	41	8	6	15.816	0.12	0.10	*	-1.02	-0.94
12	41	9	7	15.857	0.16	0.13	-	-0.89	-0.80
12	41	10	8	15.907	0.21	0.17	-	-0.77	-0.69
12	41	11	9	15.688	-0.01	-0.01	-	ERR	ERR
12	41	12	10	15.618	-0.08	-0.07	-	ERR	ERR
12	41	13	11	15.625	-0.08	-0.06	-	ERR	ERR
12	41	14	12	15.672	-0.03	-0.02	-	ERR	ERR
12	41	15	13	15.568	-0.13	-0.11	-	ERR	ERR
12	41	16	14	15.710	0.01	0.01	-	-2.09	-2.01
12	41	17	15	15.779	0.08	0.07	-	-1.19	-1.10
12	41	18	16	15.751	0.05	0.04	-	-1.38	-1.29
12	41	19	17	15.640	-0.06	-0.05	-	ERR	ERR
12	41	20	18	15.709	0.01	0.01	-	-2.13	-2.05
12	41	21	19	15.535	-0.17	-0.14	-	ERR	ERR
12	41	22	20	15.758	0.06	0.05	-	-1.32	-1.23
12	41	23	21	15.641	-0.06	-0.05	-	ERR	ERR
12	41	24	22	15.581	-0.12	-0.10	-	ERR	ERR
12	41	25	23	15.484	-0.22	-0.18	-	ERR	ERR
12	41	26	24	15.777	0.08	0.06	-	-1.20	-1.11
12	41	27	25	15.788	0.09	0.07	-	-1.14	-1.06

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19A

DATE= 11/08/90

CASING DIAMETER= 5.93 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 36.83 FEET
 INITIAL WATER ABOVE TRANS.= 15.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO				
RISING HEAD TEST									
12	42	7	0	14.598	1.10	1.00	**	0.00	0.04
12	42	8	1	15.326	0.37	0.34		-0.47	-0.43
12	42	9	2	15.542	0.16	0.14		-0.84	-0.80
12	42	10	3	15.403	0.30	0.27		-0.57	-0.53
12	42	11	4	15.564	0.14	0.12		-0.91	-0.86
12	42	12	5	15.552	0.15	0.13		-0.87	-0.83
12	42	13	6	15.580	0.12	0.11		-0.96	-0.92
12	42	14	7	15.749	-0.05	-0.04		ERR	ERR
12	42	15	8	15.624	0.08	0.07		-1.16	-1.12
12	42	16	9	15.779	-0.08	-0.07		ERR	ERR
12	42	17	10	15.866	-0.17	-0.15		ERR	ERR
12	42	18	11	15.596	0.10	0.09		-1.02	-0.98
12	42	19	12	15.899	-0.20	-0.18		ERR	ERR
12	42	20	13	15.579	0.12	0.11		-0.96	-0.92
12	42	21	14	15.661	0.04	0.04	**	-1.45	-1.41
12	42	22	15	15.677	0.02	0.02		-1.68	-1.64
12	42	23	16	15.804	-0.10	-0.09		ERR	ERR
12	42	25	18	15.688	0.01	0.01		-1.96	-1.92
12	42	26	19	15.618	0.08	0.07		-1.13	-1.08
12	42	27	20	15.765	-0.07	-0.06		ERR	ERR
12	42	28	21	15.609	0.09	0.08		-1.09	-1.04
12	42	29	22	15.696	0.00	0.00		-2.50	-2.45
12	42	30	23	15.889	-0.19	-0.17		ERR	ERR
12	42	31	24	15.898	-0.20	-0.18		ERR	ERR
12	42	32	25	15.882	-0.18	-0.17		ERR	ERR
12	42	33	26	15.695	0.00	0.00		-2.35	-2.31
12	42	34	27	15.682	0.02	0.02		-1.80	-1.75
12	42	35	28	15.666	0.03	0.03		-1.50	-1.46
12	42	36	29	15.897	-0.20	-0.18		ERR	ERR
12	42	37	30	15.707	-0.01	-0.01		ERR	ERR
12	42	38	31	15.871	-0.17	-0.15		ERR	ERR
12	42	39	32	15.681	0.02	0.02		-1.75	-1.71
12	42	40	33	15.610	0.09	0.08		-1.09	-1.05
12	42	41	34	15.869	-0.17	-0.15		ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19A

DATE- 11/08/90
 CASING DIAMETER- 5.93 INCHES
 SAND DIAMETER- 8 INCHES
 OPEN INTERVAL- 36.83 FEET
 INITIAL WATER ABOVE TRANS.- 15.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
12	42	42	35	15.613	0.09	0.08	-1.10	-1.06
12	42	43	36	15.828	-0.13	-0.12	ERR	ERR
12	42	44	37	15.687	0.01	0.01	-1.94	-1.90
12	42	45	38	15.523	0.18	0.16	-0.79	-0.75
12	42	46	39	15.848	-0.15	-0.13	ERR	ERR
12	42	47	40	15.637	0.06	0.06	-1.25	-1.20
12	42	48	41	15.635	0.07	0.06	-1.23	-1.19
12	42	49	42	15.555	0.14	0.13	-0.88	-0.84
12	42	50	43	15.834	-0.13	-0.12	ERR	ERR
12	42	51	44	15.738	-0.04	-0.03	ERR	ERR
12	42	52	45	15.564	0.14	0.12	-0.91	-0.86
12	42	53	46	15.709	-0.01	-0.01	ERR	ERR
12	42	54	47	15.892	-0.19	-0.17	ERR	ERR
12	42	55	48	15.852	-0.15	-0.14	ERR	ERR
12	42	56	49	15.590	0.11	0.10	-1.00	-0.96
12	42	57	50	15.695	0.00	0.00	-2.35	-2.31
12	42	58	51	15.715	-0.01	-0.01	ERR	ERR
12	42	59	52	15.633	0.07	0.06	-1.22	-1.17
12	43	0	53	15.559	0.14	0.13	-0.89	-0.85
12	43	1	54	15.672	0.03	0.02	-1.60	-1.56
12	43	2	55	15.672	0.03	0.03	-1.59	-1.55
12	43	3	56	15.597	0.10	0.09	-1.03	-0.99
12	43	4	57	15.638	0.06	0.06	-1.25	-1.20
12	43	5	58	15.628	0.07	0.07	-1.18	-1.14
12	43	6	59	15.762	-0.06	-0.06	ERR	ERR
12	43	7	60	15.758	-0.06	-0.05	ERR	ERR
12	43	8	61	15.621	0.08	0.07	-1.15	-1.10
12	43	9	62	15.539	0.16	0.15	-0.84	-0.79
12	43	10	63	15.729	-0.03	-0.03	ERR	ERR
12	43	11	64	15.690	0.01	0.01	-2.06	-2.02
12	43	12	65	15.838	-0.14	-0.13	ERR	ERR
12	43	13	66	15.873	-0.17	-0.16	ERR	ERR
12	43	14	67	15.603	0.10	0.09	-1.05	-1.01
12	43	15	68	15.840	-0.14	-0.13	ERR	ERR
12	43	16	69	15.811	-0.11	-0.10	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19A

DATE= 11/08/90

CASING DIAMETER= 5.93 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 36.83 FEET
 INITIAL WATER ABOVE TRANS.= 15.7 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
12	43	17	70	15.605	0.09	0.09	-1.07	-1.02	
12	43	18	71	15.853	-0.15	-0.14	ERR	ERR	
12	43	19	72	15.859	-0.16	-0.14	ERR	ERR	
12	43	20	73	15.890	-0.19	-0.17	ERR	ERR	
12	43	21	74	15.854	-0.15	-0.14	ERR	ERR	
12	43	22	75	15.760	-0.06	-0.05	ERR	ERR	
12	43	23	76	15.893	-0.19	-0.18	ERR	ERR	
12	43	24	77	15.677	0.02	0.02	-1.68	-1.64	
12	43	25	78	15.636	0.06	0.06	-1.24	-1.20	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-19A

DATE- 11/08/90
CASING DIAMETER- 5.93 INCHES
SAND DIAMETER- 8 INCHES
OPEN INTERVAL- 36.83 FEET
INITIAL WATER ABOVE TRANS.- 15.7 FEET

24-HR CLOCK TIME HOURS MINUTES SECONDS	ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD (FEET)	HEAD RATIO	LOG HEAD RATIO	LOG HEAD
-----	-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 4.65E-02 CM/SEC FALLING HEAD*

K= 2.84E-02 CM/SEC RISING HEAD**

OW-21

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-21

DATE= 11/06/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 10.0 FEET
 INITIAL WATER ABOVE TRANS.= 9.93 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		
FALLING HEAD								
9	42	54	0	11.349	1.42	1.00	0.00	0.15
9	42	56	2	11.251	1.32	0.93	-0.03	0.12
9	42	58	4	11.257	1.32	0.93	-0.03	0.12
9	43	0	6	11.182	1.25	0.88	-0.05	0.10
9	43	2	8	11.114	1.18	0.83	-0.08	0.07
9	43	4	10	11.038	1.11	0.78	-0.11	0.04
9	43	6	12	10.974	1.04	0.74	-0.13	0.02
9	43	8	14	10.945	1.01	0.71	-0.15	0.01
9	43	10	16	10.896	0.96	0.68	-0.17	-0.02
9	43	12	18	10.832	0.90	0.64	-0.20	-0.05
9	43	14	20	10.789	0.86	0.60	-0.22	-0.07
9	43	16	22	10.738	0.81	0.57	-0.25	-0.09
9	43	18	24	10.695	0.76	0.54	-0.27	-0.12
9	43	20	26	10.659	0.73	0.51	-0.29	-0.14
9	43	22	28	10.628	0.70	0.49	-0.31	-0.16
9	43	24	30	10.585	0.65	0.46	-0.34	-0.19
9	43	26	32	10.555	0.62	0.44	-0.36	-0.21
9	43	28	34	10.521	0.59	0.42	-0.38	-0.23
9	43	30	36	10.493	0.56	0.40	-0.40	-0.25
9	43	32	38	10.463	0.53	0.38	-0.43	-0.27
9	43	34	40	10.434	0.50	0.35	-0.45	-0.30
9	43	36	42	10.408	0.48	0.34	-0.47	-0.32
9	43	38	44	10.387	0.46	0.32	-0.49	-0.34
9	43	40	46	10.384	0.45	0.32	-0.50	-0.35
9	43	42	48	10.360	0.43	0.30	-0.52	-0.37
9	43	44	50	10.323	0.39	0.28	-0.56	-0.41
9	43	46	52	10.312	0.38	0.27	-0.57	-0.42
9	43	48	54	10.282	0.35	0.25	-0.61	-0.46
9	43	50	56	10.267	0.33	0.24	-0.63	-0.48
9	43	52	58	10.250	0.32	0.22	-0.65	-0.50
9	43	54	60	10.235	0.30	0.21	-0.67	-0.52
9	43	56	62	10.224	0.29	0.21	-0.69	-0.53
9	43	58	64	10.203	0.27	0.19	-0.72	-0.57
9	44	0	66	10.195	0.26	0.19	-0.73	-0.58

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-21

DATE= 11/06/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 10.0 FEET
 INITIAL WATER ABOVE TRANS.= 9.93 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		
9	44	2	68	10.179	0.25	0.17	-0.76	-0.61
9	44	4	70	10.162	0.23	0.16	-0.79	-0.64
9	44	6	72	10.152	0.22	0.16	-0.81	-0.66
9	44	8	74	10.137	0.20	0.14	-0.84	-0.69
9	44	10	76	10.128	0.20	0.14	-0.86	-0.71
9	44	12	78	10.119	0.19	0.13	-0.88	-0.73
9	44	14	80	10.115	0.18	0.13	-0.89	-0.74
9	44	16	82	10.104	0.17	0.12	-0.92	-0.76
9	44	18	84	10.099	0.17	0.12	-0.93	-0.78
9	44	25	91	10.067	0.14	0.10	-1.02	-0.87
9	44	30	96	10.059	0.13	0.09	-1.05	-0.90
9	44	35	101	10.044	0.11	0.08	-1.10	-0.95
9	44	40	106	10.019	0.09	0.06	-1.21	-1.06
9	44	45	111	10.015	0.08	0.06	-1.23	-1.08
9	44	50	116	10.022	0.09	0.06	-1.20	-1.05
9	44	55	121	9.993	0.06	0.04	-1.36	-1.21
9	45	0	126	9.990	0.06	0.04	-1.39	-1.24
9	45	5	131	9.980	0.05	0.03	-1.47	-1.31
9	45	10	136	9.977	0.04	0.03	-1.50	-1.35
9	45	15	141	9.963	0.03	0.02	-1.66	-1.51
9	45	20	146	9.966	0.03	0.02	-1.62	-1.47
9	45	25	151	9.958	0.03	0.02	-1.73	-1.58
9	45	30	156	9.954	0.02	0.02	-1.81	-1.65
9	45	35	161	9.952	0.02	0.01	-1.85	-1.70
9	45	40	166	9.949	0.02	0.01	-1.92	-1.77
9	45	45	171	9.951	0.02	0.01	-1.87	-1.72
9	45	50	176	9.938	0.01	0.00	-2.36	-2.20
9	45	55	181	9.935	0.00	0.00	-2.67	-2.52
9	46	6	192	9.946	0.01	0.01	-2.02	-1.87
9	46	8	194	9.933	0.00	0.00	-3.18	-3.03
9	46	10	196	9.936	0.00	0.00	-2.56	-2.40
9	46	12	198	9.932	0.00	0.00	-3.47	-3.32

DECEMBER 1990

693-6255

VARIABLE HEAD TEST

WELL NO. OW-21

DATE- 11/06/90
 CASING DIAMETER- 4 INCHES
 SAND DIAMETER- 12 INCHES
 OPEN INTERVAL- 10.0 FEET
 INITIAL WATER ABOVE TRANS.- 9.93 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
RISING HEAD								
9	46	44	0	8.860	1.07	1.00	..	0.00
9	46	46	2	8.910	1.02	0.95	-0.02	0.01
9	46	48	4	8.959	0.97	0.91	-0.04	-0.01
9	46	50	6	9.006	0.93	0.86	-0.06	-0.03
9	46	52	8	9.052	0.88	0.82	-0.09	-0.06
9	46	54	10	9.095	0.84	0.78	-0.11	-0.08
9	46	56	12	9.135	0.80	0.74	-0.13	-0.10
9	47	2	18	9.232	0.70	0.65	-0.19	-0.16
9	47	4	20	9.271	0.66	0.62	-0.21	-0.18
9	47	6	22	9.296	0.64	0.59	-0.23	-0.20
9	47	8	24	9.332	0.60	0.56	-0.25	-0.22
9	47	10	26	9.358	0.57	0.54	..	-0.27
9	47	12	28	9.400	0.53	0.50	-0.30	-0.27
9	47	14	30	9.398	0.53	0.50	-0.30	-0.27
9	47	16	32	9.430	0.50	0.47	-0.33	-0.30
9	47	18	34	9.454	0.48	0.45	-0.35	-0.32
9	47	20	36	9.478	0.45	0.42	-0.37	-0.34
9	47	22	38	9.505	0.43	0.40	-0.40	-0.37
9	47	24	40	9.517	0.41	0.39	-0.41	-0.38
9	47	26	42	9.535	0.40	0.37	-0.43	-0.40
9	47	28	44	9.554	0.38	0.35	-0.45	-0.42
9	47	30	46	9.572	0.36	0.34	-0.47	-0.44
9	47	32	48	9.587	0.35	0.32	-0.49	-0.46
9	47	34	50	9.605	0.33	0.31	-0.52	-0.48
9	47	36	52	9.632	0.30	0.28	-0.55	-0.52
9	47	38	54	9.628	0.30	0.28	-0.55	-0.52
9	47	40	56	9.640	0.29	0.27	-0.56	-0.53
9	47	42	58	9.659	0.27	0.25	-0.59	-0.56
9	47	44	60	9.666	0.27	0.25	-0.60	-0.57
9	47	46	62	9.679	0.25	0.24	-0.63	-0.60
9	47	48	64	9.688	0.24	0.23	-0.64	-0.61
9	47	50	66	9.704	0.23	0.21	-0.67	-0.64
9	47	52	68	9.708	0.22	0.21	-0.68	-0.65
9	47	54	70	9.717	0.22	0.20	-0.70	-0.67

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-21

DATE= 11/06/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 10.0 FEET
 INITIAL WATER ABOVE TRANS.= 9.93 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
9	47	56	72	9.719	0.21	0.20	-0.70	-0.67
9	47	58	74	9.732	0.20	0.19	-0.73	-0.70
9	48	0	76	9.742	0.19	0.18	-0.75	-0.72
9	48	2	78	9.760	0.17	0.16	-0.79	-0.76
9	48	4	80	9.768	0.16	0.15	-0.82	-0.78
9	48	6	82	9.765	0.17	0.16	-0.81	-0.78
9	48	8	84	9.788	0.14	0.13	-0.87	-0.84
9	48	10	86	9.778	0.15	0.14	-0.84	-0.81
9	48	12	88	9.784	0.15	0.14	-0.86	-0.83
9	48	14	90	9.797	0.13	0.13	-0.90	-0.87
9	48	16	92	9.799	0.13	0.12	-0.91	-0.87
9	48	18	94	9.805	0.13	0.12	-0.93	-0.90
9	48	20	96	9.814	0.12	0.11	-0.96	-0.93
9	48	30	106	9.823	0.11	0.10	-0.99	-0.96
9	48	35	111	9.830	0.10	0.09	-1.02	-0.99
9	48	40	116	9.842	0.09	0.08	-1.07	-1.04
9	48	45	121	9.849	0.08	0.08	-1.11	-1.08
9	48	50	126	9.864	0.07	0.06	-1.20	-1.17
9	48	55	131	9.857	0.08	0.07	-1.15	-1.12
9	49	0	136	9.875	0.06	0.05	-1.28	-1.25
9	49	5	141	9.883	0.05	0.05	-1.34	-1.31
9	49	15	151	9.884	0.05	0.05	-1.34	-1.31
9	49	20	156	9.899	0.03	0.03	-1.52	-1.49
9	49	25	161	9.896	0.04	0.03	-1.47	-1.44
9	49	30	166	9.899	0.03	0.03	-1.51	-1.48
9	49	35	171	9.897	0.04	0.03	-1.49	-1.46
9	49	40	176	9.905	0.03	0.03	-1.60	-1.57
9	49	45	181	9.909	0.02	0.02	-1.67	-1.64
9	49	50	186	9.909	0.02	0.02	-1.66	-1.63
9	49	55	191	9.918	0.01	0.01	-1.89	-1.86
9	50	0	196	9.914	0.02	0.02	-1.78	-1.75
9	50	5	201	9.909	0.02	0.02	-1.66	-1.63
9	50	10	206	9.911	0.02	0.02	-1.71	-1.68
9	50	15	211	9.905	0.03	0.02	-1.60	-1.57

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-21

DATE= 11/06/90
CASING DIAMETER= 4 INCHES
SAND DIAMETER= 12 INCHES
OPEN INTERVAL= 10.0 FEET
INITIAL WATER ABOVE TRANS.= 9.93 FEET

24-HR CLOCK TIME			WATER			LOG	
			ELAPSED	ABOVE	HEAD	HEAD	LOG
HOURS	MINUTES	SECONDS	(SEC)	TRANS.	(FEET)	RATIO	HEAD
-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 3.40E-03 CM/SEC FALLING HEAD*

K= 3.04E-03 CM/SEC RISING HEAD**

OW-23

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE= 11/08/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	14.0 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			

FALLING HEAD TEST

14	7	30	0	9.006	1.41	1.00	*	0.00	0.15
14	7	32	2	8.978	1.38	0.98	-0.01	0.14	
14	7	34	4	8.957	1.36	0.97	-0.02	0.13	
14	7	36	6	8.929	1.33	0.95	-0.02	0.12	
14	7	38	8	8.915	1.31	0.94	-0.03	0.12	
14	7	40	10	8.902	1.30	0.93	-0.03	0.11	
14	7	42	12	8.831	1.23	0.88	-0.06	0.09	
14	7	44	14	8.790	1.19	0.85	-0.07	0.08	
14	7	46	16	8.932	1.33	0.95	-0.02	0.12	
14	7	48	18	8.776	1.18	0.84	-0.08	0.07	
14	7	50	20	8.704	1.10	0.79	-0.11	0.04	
14	7	52	22	8.769	1.17	0.83	-0.08	0.07	
14	7	54	24	8.771	1.17	0.83	-0.08	0.07	
14	7	56	26	8.629	1.03	0.73	-0.14	0.01	
14	7	58	28	8.599	1.00	0.71	-0.15	-0.00	
14	8	0	30	8.678	1.08	0.77	-0.12	0.03	
14	8	2	32	8.608	1.01	0.72	-0.14	0.00	
14	8	4	34	8.814	1.21	0.86	-0.06	0.08	
14	8	6	36	8.756	1.16	0.82	-0.09	0.06	
14	8	8	38	8.539	0.94	0.67	-0.18	-0.03	
14	8	10	40	8.471	0.87	0.62	-0.21	-0.06	
14	8	12	42	8.839	1.24	0.88	-0.05	0.09	
14	8	14	44	8.478	0.88	0.62	-0.20	-0.06	
14	8	16	46	8.453	0.85	0.61	-0.22	-0.07	
14	8	18	48	8.683	1.08	0.77	-0.11	0.03	
14	8	20	50	8.382	0.78	0.56	-0.25	-0.11	
14	8	22	52	8.504	0.90	0.64	-0.19	-0.04	
14	8	24	54	8.596	1.00	0.71	-0.15	-0.00	
14	8	26	56	8.622	1.02	0.73	-0.14	0.01	
14	8	28	58	8.330	0.73	0.52	-0.28	-0.14	
14	8	30	60	8.450	0.85	0.60	-0.22	-0.07	
14	8	32	62	8.472	0.87	0.62	-0.21	-0.06	
14	8	34	64	8.638	1.04	0.74	-0.13	0.02	
14	8	36	66	8.440	0.84	0.60	-0.22	-0.08	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE= 11/08/90

CASING DIAMETER= 4 INCHES

SAND DIAMETER= 10 INCHES

OPEN INTERVAL= 14.0 FEET

INITIAL WATER ABOVE TRANS.= 7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG		
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD	
14	8	38	68	8.441	0.84	0.60	-0.22	-0.08	
14	8	40	70	8.237	0.64	0.45	-0.34	-0.20	
14	8	42	72	8.232	0.63	0.45	-0.35	-0.20	
14	8	44	74	8.241	0.64	0.46	-0.34	-0.19	
14	8	46	76	8.606	1.01	0.72	-0.15	0.00	
14	8	48	78	8.178	0.58	0.41	-0.39	-0.24	
14	8	50	80	8.333	0.73	0.52	-0.28	-0.13	
14	8	52	82	8.177	0.58	0.41	-0.39	-0.24	
14	8	54	84	8.228	0.63	0.45	-0.35	-0.20	
14	8	56	86	8.340	0.74	0.53	-0.28	-0.13	
14	8	58	88	8.159	0.56	0.40	-0.40	-0.25	
14	9	0	90	8.263	0.66	0.47	-0.33	-0.18	
14	9	2	92	8.320	0.72	0.51	-0.29	-0.14	
14	9	4	94	8.158	0.56	0.40	-0.40	-0.25	
14	9	6	96	8.156	0.56	0.40	-0.40	-0.25	
14	9	8	98	8.205	0.60	0.43	-0.37	-0.22	
14	9	10	100	8.069	0.47	0.33	-0.48	-0.33	
14	9	12	102	8.280	0.68	0.48	-0.32	-0.17	
14	9	14	104	8.047	0.45	0.32	-0.50	-0.35	
14	9	16	106	8.040	0.44	0.31	-0.50	-0.36	
14	9	18	108	8.067	0.47	0.33	-0.48	-0.33	
14	9	20	110	8.298	0.70	0.50	-0.30	-0.16	
14	9	22	112	8.005	0.40	0.29	-0.54	-0.39	
14	9	24	114	8.193	0.59	0.42	-0.37	-0.23	
14	9	26	116	8.298	0.70	0.50	-0.30	-0.16	
14	9	28	118	8.275	0.68	0.48	-0.32	-0.17	
14	9	30	120	8.064	0.46	0.33	-0.48	-0.33	
14	9	32	122	7.984	0.38	0.27	-0.56	-0.42	
14	9	34	124	7.958	0.36	0.25	-0.59	-0.45	
14	9	36	126	8.339	0.74	0.53	-0.28	-0.13	
14	9	38	128	8.330	0.73	0.52	-0.28	-0.14	
14	9	40	130	8.169	0.57	0.41	-0.39	-0.24	
14	9	42	132	7.921	0.32	0.23	-0.64	-0.49	
14	9	44	134	7.916	0.32	0.22	-0.65	-0.50	
14	9	46	136	8.023	0.42	0.30	-0.52	-0.37	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE= 11/08/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	14.0 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)				
14	9	48	138	8.148	0.55	0.39	-0.41	-0.26	
14	9	50	140	8.197	0.60	0.42	-0.37	-0.22	
14	9	52	142	8.192	0.59	0.42	-0.38	-0.23	
14	9	54	144	8.111	0.51	0.36	-0.44	-0.29	
14	9	56	146	7.857	0.26	0.18	-0.74	-0.59	
14	9	58	148	8.072	0.47	0.34	-0.47	-0.33	
14	10	0	150	7.874	0.27	0.19	-0.71	-0.56	
14	10	2	152	8.043	0.44	0.32	-0.50	-0.35	
14	10	4	154	8.030	0.43	0.31	-0.51	-0.37	
14	10	6	156	8.058	0.46	0.33	-0.49	-0.34	
14	10	8	158	7.986	0.39	0.27	-0.56	-0.41	
14	10	10	160	7.910	0.31	0.22	-0.66	-0.51	
14	10	12	162	7.810	0.21	0.15	-0.83	-0.68	
14	10	14	164	7.810	0.21	0.15	-0.83	-0.68	
14	10	16	166	7.821	0.22	0.16	-0.80	-0.66	
14	10	18	168	8.130	0.53	0.38	-0.42	-0.28	
14	10	20	170	7.840	0.24	0.17	-0.77	-0.62	
14	10	22	172	7.790	0.19	0.13	-0.87	-0.72	
14	10	24	174	8.150	0.55	0.39	-0.41	-0.26	
14	10	26	176	7.898	0.30	0.21	-0.67	-0.53	
14	10	28	178	8.111	0.51	0.36	-0.44	-0.29	
14	10	30	180	7.795	0.20	0.14	-0.86	-0.71	
14	10	32	182	8.148	0.55	0.39	-0.41	-0.26	
14	10	34	184	7.952	0.35	0.25	-0.60	-0.45	
14	10	36	186	8.065	0.47	0.33	-0.48	-0.33	
14	10	38	188	7.742	0.14	0.10	-1.00	-0.85	
14	10	40	190	8.152	0.55	0.39	-0.41	-0.26	
14	10	42	192	7.760	0.16	0.11	-0.94	-0.80	
14	10	44	194	7.977	0.38	0.27	-0.57	-0.42	
14	10	46	196	7.856	0.26	0.18	-0.74	-0.59	
14	10	48	198	7.803	0.20	0.14	-0.84	-0.69	
14	10	50	200	7.972	0.37	0.26	-0.58	-0.43	
14	10	52	202	7.982	0.38	0.27	-0.57	-0.42	
14	10	54	204	8.019	0.42	0.30	-0.53	-0.38	
14	10	56	206	8.001	0.40	0.29	-0.54	-0.40	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE= 11/08/90

CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 14.0 FEET
 INITIAL WATER ABOVE TRANS.= 7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
14	10	58	208	7.978	0.38	0.27	-0.57	-0.42
14	11	0	210	8.115	0.51	0.37	-0.44	-0.29
14	11	2	212	7.915	0.32	0.22	-0.65	-0.50
14	11	4	214	7.978	0.38	0.27	-0.57	-0.42
14	11	6	216	7.775	0.18	0.12	-0.90	-0.76
14	11	16	226	7.940	0.34	0.24	-0.62	-0.47
14	11	18	228	7.685	0.08	0.06	-1.22	-1.07
14	11	20	230	7.670	0.07	0.05	-1.30	-1.15

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 14.0 FEET
 INITIAL WATER ABOVE TRANS.= 7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
14	11	26	0	6.145	1.46	1.00	**	0.00
14	11	28	2	6.246	1.35	0.93	-0.03	0.13
14	11	30	4	6.481	1.12	0.77	-0.11	0.05
14	11	32	6	6.490	1.11	0.76	-0.12	0.05
14	11	34	8	6.413	1.19	0.82	-0.09	0.07
14	11	36	10	6.230	1.37	0.94	-0.03	0.14
14	11	38	12	6.261	1.34	0.92	-0.04	0.13
14	11	40	14	6.408	1.19	0.82	-0.09	0.08
14	11	42	16	6.322	1.28	0.88	-0.06	0.11
14	11	44	18	6.607	0.99	0.68	-0.17	-0.00
14	11	46	20	6.689	0.91	0.63	-0.20	-0.04
14	11	48	22	6.453	1.15	0.79	-0.10	0.06
14	11	50	24	6.580	1.02	0.70	-0.15	0.01
14	11	52	26	6.675	0.93	0.64	-0.20	-0.03
14	11	54	28	6.627	0.97	0.67	-0.17	-0.01
14	11	56	30	6.598	1.00	0.69	-0.16	0.00
14	11	58	32	6.849	0.75	0.52	-0.29	-0.12
14	12	0	34	6.871	0.73	0.50	-0.30	-0.14
14	12	2	36	6.786	0.81	0.56	-0.25	-0.09
14	12	4	38	6.596	1.00	0.69	-0.16	0.00
14	12	6	40	6.766	0.83	0.57	-0.24	-0.08
14	12	8	42	6.768	0.83	0.57	-0.24	-0.08
14	12	10	44	6.664	0.94	0.64	-0.19	-0.03
14	12	12	46	6.927	0.67	0.46	-0.34	-0.17
14	12	14	48	6.706	0.89	0.61	-0.21	-0.05
14	12	16	50	6.729	0.87	0.60	-0.22	-0.06
14	12	18	52	6.970	0.63	0.43	-0.36	-0.20
14	12	20	54	6.980	0.62	0.43	-0.37	-0.21
14	12	22	56	6.795	0.80	0.55	-0.26	-0.09
14	12	24	58	7.056	0.54	0.37	-0.43	-0.26
14	12	26	60	6.845	0.75	0.52	-0.29	-0.12
14	12	28	62	6.948	0.65	0.45	-0.35	-0.19
14	12	30	64	6.909	0.69	0.47	-0.32	-0.16
14	12	32	66	7.118	0.48	0.33	-0.48	-0.32

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE- 11/08/90

CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 14.0 FEET
 INITIAL WATER ABOVE TRANS.= 7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
14	12	34	68	6.883	0.72	0.49	**	-0.31
14	12	36	70	7.012	0.59	0.40	**	-0.39
14	12	38	72	7.245	0.36	0.24	**	-0.61
14	12	40	74	7.207	0.39	0.27	**	-0.57
14	12	42	76	7.264	0.34	0.23	**	-0.64
14	12	44	78	7.277	0.32	0.22	**	-0.65
14	12	46	80	7.176	0.42	0.29	**	-0.54
14	12	48	82	7.281	0.32	0.22	**	-0.66
14	12	50	84	7.005	0.60	0.41	**	-0.39
14	12	52	86	7.165	0.44	0.30	**	-0.52
14	12	54	88	7.019	0.58	0.40	**	-0.40
14	12	56	90	7.059	0.54	0.37	**	-0.43
14	12	58	92	7.282	0.32	0.22	**	-0.66
14	13	0	94	7.351	0.25	0.17	**	-0.77
14	13	2	96	7.143	0.46	0.31	**	-0.50
14	13	4	98	7.390	0.21	0.14	**	-0.84
14	13	6	100	7.484	0.12	0.08	**	-1.10
14	13	8	102	7.399	0.20	0.14	**	-0.86
14	13	10	104	7.261	0.34	0.23	**	-0.63
14	13	12	106	7.125	0.48	0.33	**	-0.49
14	13	14	108	7.383	0.22	0.15	**	-0.83
14	13	16	110	7.369	0.23	0.16	**	-0.80
14	13	18	112	7.265	0.33	0.23	**	-0.64
14	13	20	114	7.188	0.41	0.28	**	-0.55
14	13	22	116	7.437	0.16	0.11	**	-0.95
14	13	24	118	7.205	0.39	0.27	**	-0.57
14	13	26	120	7.237	0.36	0.25	**	-0.60
14	13	28	122	7.465	0.14	0.09	**	-1.03
14	13	30	124	7.541	0.06	0.04	**	-1.39
14	13	32	126	7.402	0.20	0.14	**	-0.87
14	13	34	128	7.560	0.04	0.03	**	-1.56
14	13	36	130	7.420	0.18	0.12	**	-0.91
14	13	38	132	7.400	0.20	0.14	**	-0.86
14	13	40	134	7.277	0.32	0.22	**	-0.65
14	13	42	136	7.441	0.16	0.11	**	-0.96

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE= 11/08/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	14.0 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
14	13	44	138	7.442	0.16	0.11	-0.96	-0.80	
14	13	46	140	7.571	0.03	0.02	-1.70	-1.54	
14	13	48	142	7.585	0.01	0.01	-1.99	-1.83	
14	13	50	144	7.419	0.18	0.12	-0.91	-0.74	
14	13	52	146	7.509	0.09	0.06	-1.20	-1.04	
14	13	54	148	7.465	0.14	0.09	-1.03	-0.87	
14	13	56	150	7.584	0.02	0.01	-1.96	-1.80	
14	13	58	152	7.645	-0.04	-0.03	ERR	ERR	
14	14	0	154	7.322	0.28	0.19	-0.72	-0.56	
14	14	2	156	7.304	0.30	0.20	-0.69	-0.53	
14	14	4	158	7.571	0.03	0.02	-1.70	-1.54	
14	14	6	160	7.640	-0.04	-0.03	ERR	ERR	
14	14	8	162	7.528	0.07	0.05	-1.31	-1.15	
14	14	10	164	7.434	0.17	0.11	-0.94	-0.78	
14	14	12	166	7.340	0.26	0.18	-0.75	-0.58	
14	14	14	168	7.355	0.24	0.17	-0.77	-0.61	
14	14	16	170	7.463	0.14	0.09	-1.03	-0.86	
14	14	18	172	7.481	0.12	0.08	-1.09	-0.93	
14	14	20	174	7.358	0.24	0.17	-0.78	-0.62	
14	14	22	176	7.431	0.17	0.12	-0.94	-0.77	
14	14	24	178	7.529	0.07	0.05	-1.31	-1.15	
14	14	26	180	7.426	0.17	0.12	-0.92	-0.76	
14	14	28	182	7.512	0.09	0.06	-1.22	-1.06	
14	14	30	184	7.678	-0.08	-0.05	ERR	ERR	
14	14	32	186	7.398	0.20	0.14	-0.86	-0.69	
14	14	34	188	7.705	-0.11	-0.07	ERR	ERR	
14	14	36	190	7.434	0.17	0.11	-0.94	-0.78	
14	14	38	192	7.685	-0.08	-0.06	ERR	ERR	
14	14	40	194	7.491	0.11	0.07	-1.13	-0.96	
14	14	42	196	7.720	-0.12	-0.08	ERR	ERR	
14	14	44	198	7.791	-0.19	-0.13	ERR	ERR	
14	14	46	200	7.466	0.13	0.09	-1.04	-0.87	
14	14	48	202	7.465	0.14	0.09	-1.03	-0.87	
14	14	50	204	7.429	0.17	0.12	-0.93	-0.77	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE- 11/08/90

CASING DIAMETER- 4 INCHES

SAND DIAMETER- 10 INCHES

OPEN INTERVAL- 14.0 FEET

INITIAL WATER ABOVE TRANS.- 7.6 FEET

24-HR CLOCK TIME			WATER				LOG	
HOURS	MINUTES	SECONDS	ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
-----	-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.13E-03 CM/SEC FALLING HEAD*

K= 1.38E-03 CM/SEC RISING HEAD**

OW-30A

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30A

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 8.63 FEET
 INITIAL WATER ABOVE TRANS.= 7.45 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		FEET	FEET	HEAD			
FALLING HEAD TEST									
15	58	34	0	8.651	1.20	1.00	0.00	0.08	
15	58	36	2	8.593	1.14	0.95	-0.02	0.06	
15	58	38	4	8.360	0.91	0.76	-0.12	-0.04	
15	58	40	6	8.169	0.72	0.60	-0.22	-0.14	
15	58	42	8	8.075	0.62	0.52	-0.28	-0.20	
15	58	44	10	7.950	0.50	0.42	-0.38	-0.30	
15	58	46	12	7.904	0.45	0.38	-0.42	-0.34	
15	58	48	14	7.796	0.35	0.29	-0.54	-0.46	
15	58	50	16	7.745	0.29	0.25	-0.61	-0.53	
15	58	52	18	7.737	0.29	0.24	-0.62	-0.54	
15	58	54	20	7.666	0.22	0.18	-0.75	-0.67	
15	58	56	22	7.642	0.19	0.16	-0.80	-0.72	
15	58	58	24	7.604	0.15	0.13	-0.89	-0.81	
15	59	0	26	7.591	0.14	0.12	-0.93	-0.85	
15	59	2	28	7.579	0.13	0.11	-0.97	-0.89	
15	59	4	30	7.582	0.13	0.11	-0.96	-0.88	
15	59	6	32	7.549	0.10	0.08	-1.09	-1.01	
15	59	8	34	7.539	0.09	0.07	-1.13	-1.05	
15	59	10	36	7.529	0.08	0.07	-1.18	-1.10	
15	59	12	38	7.527	0.08	0.06	-1.19	-1.11	
15	59	14	40	7.507	0.06	0.05	-1.32	-1.24	
15	59	16	42	7.502	0.05	0.04	-1.36	-1.28	
15	59	18	44	7.523	0.07	0.06	-1.22	-1.14	
15	59	20	46	7.528	0.08	0.07	-1.19	-1.11	
15	59	22	48	7.498	0.05	0.04	-1.40	-1.32	
15	59	24	50	7.489	0.04	0.03	-1.48	-1.40	
15	59	26	52	7.496	0.05	0.04	-1.42	-1.34	
15	59	28	54	7.513	0.06	0.05	-1.28	-1.20	
15	59	30	56	7.492	0.04	0.04	-1.45	-1.37	
15	59	32	58	7.485	0.03	0.03	-1.54	-1.46	
15	59	34	60	7.481	0.03	0.03	-1.59	-1.51	
15	59	36	62	7.483	0.03	0.03	-1.56	-1.48	
15	59	38	64	7.518	0.07	0.06	-1.25	-1.17	
15	59	40	66	7.480	0.03	0.02	-1.61	-1.53	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30A

DATE= 11/07/90

CASING	DIAMETER=	7.04 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	8.63 FEET
INITIAL WATER ABOVE TRANS.=		7.45 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
15	59	42	68	7.492	0.04	0.04	-1.45	-1.37	
15	59	44	70	7.491	0.04	0.03	-1.47	-1.39	
15	59	46	72	7.490	0.04	0.03	-1.48	-1.40	
15	59	48	74	7.489	0.04	0.03	-1.49	-1.41	
15	59	50	76	7.487	0.04	0.03	-1.51	-1.43	
15	59	52	78	7.480	0.03	0.03	-1.60	-1.52	
15	59	54	80	7.491	0.04	0.03	-1.47	-1.39	
16	0	5	91	7.488	0.04	0.03	-1.50	-1.42	
16	0	10	96	7.486	0.04	0.03	-1.52	-1.44	
16	0	15	101	7.511	0.06	0.05	-1.29	-1.21	
16	0	20	106	7.514	0.06	0.05	-1.27	-1.19	
16	0	25	111	7.496	0.05	0.04	-1.42	-1.34	
16	0	30	116	7.495	0.05	0.04	-1.43	-1.35	
16	0	35	121	7.500	0.05	0.04	-1.38	-1.30	
16	0	40	126	7.503	0.05	0.04	-1.36	-1.28	
16	0	45	131	7.507	0.06	0.05	-1.32	-1.25	
16	0	50	136	7.509	0.06	0.05	-1.31	-1.23	
16	0	55	141	7.533	0.08	0.07	-1.16	-1.08	
16	1	0	146	7.536	0.09	0.07	-1.14	-1.06	
16	1	5	151	7.515	0.07	0.05	-1.27	-1.19	
16	1	10	156	7.516	0.07	0.06	-1.26	-1.18	
16	1	15	161	7.520	0.07	0.06	-1.23	-1.15	
16	1	20	166	7.521	0.07	0.06	-1.23	-1.15	
16	1	25	171	7.524	0.07	0.06	-1.21	-1.13	
16	1	30	176	7.526	0.08	0.06	-1.20	-1.12	
16	1	35	181	7.548	0.10	0.08	-1.09	-1.01	
16	1	40	186	7.529	0.08	0.07	-1.18	-1.10	
16	1	45	191	7.530	0.08	0.07	-1.18	-1.10	
16	1	50	196	7.530	0.08	0.07	-1.18	-1.10	
16	2	6	212	7.533	0.08	0.07	-1.16	-1.08	
16	2	14	220	7.556	0.11	0.09	-1.06	-0.98	
16	2	16	222	7.533	0.08	0.07	-1.16	-1.08	
16	2	18	224	7.552	0.10	0.09	-1.07	-0.99	
16	2	20	226	7.535	0.08	0.07	-1.15	-1.07	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30A

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 8.63 FEET
 INITIAL WATER ABOVE TRANS.= 7.45 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD (FEET)	HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD				
RISING HEAD TEST									
16	2	22	0	6.292	1.16	1.00	**	0.00	0.06
16	2	24	2	6.470	0.98	0.85	-0.07	-0.01	
16	2	26	4	6.635	0.81	0.70	-0.15	-0.09	
16	2	28	6	6.752	0.70	0.60	-0.22	-0.16	
16	2	30	8	6.848	0.60	0.52	-0.28	-0.22	
16	2	32	10	6.923	0.53	0.45	-0.34	-0.28	
16	2	34	12	6.975	0.47	0.41	-0.39	-0.32	
16	2	36	14	7.038	0.41	0.36	-0.45	-0.38	
16	2	38	16	7.083	0.37	0.32	-0.50	-0.44	
16	2	40	18	7.129	0.32	0.28	-0.56	-0.49	
16	2	42	20	7.162	0.29	0.25 **	-0.60	-0.54	
16	2	44	22	7.198	0.25	0.22	-0.66	-0.60	
16	2	46	24	7.226	0.22	0.19	-0.71	-0.65	
16	2	48	26	7.260	0.19	0.16	-0.79	-0.72	
16	2	50	28	7.268	0.18	0.16	-0.80	-0.74	
16	2	52	30	7.293	0.16	0.14	-0.87	-0.80	
16	2	54	32	7.312	0.14	0.12	-0.92	-0.86	
16	2	56	34	7.319	0.13	0.11	-0.95	-0.88	
16	2	58	36	7.335	0.11	0.10	-1.00	-0.94	
16	3	0	38	7.371	0.08	0.07	-1.16	-1.10	
16	3	2	40	7.366	0.08	0.07	-1.14	-1.08	
16	3	4	42	7.379	0.07	0.06	-1.21	-1.15	
16	3	6	44	7.374	0.08	0.07	-1.18	-1.12	
16	3	8	46	7.402	0.05	0.04	-1.39	-1.32	
16	3	10	48	7.399	0.05	0.04	-1.36	-1.29	
16	3	12	50	7.422	0.03	0.02	-1.61	-1.55	
16	3	14	52	7.402	0.05	0.04	-1.39	-1.32	
16	3	16	54	7.413	0.04	0.03	-1.50	-1.43	
16	3	18	56	7.420	0.03	0.03	-1.59	-1.53	
16	3	20	58	7.426	0.02	0.02	-1.68	-1.62	
16	3	22	60	7.418	0.03	0.03	-1.56	-1.50	
16	3	24	62	7.463	-0.01	-0.01	ERR	ERR	
16	3	26	64	7.460	-0.01	-0.01	ERR	ERR	
16	3	28	66	7.442	0.01	0.01	-2.16	-2.10	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30A

DATE= 11/07/90
CASING DIAMETER= 7.04 INCHES
SAND DIAMETER= 10 INCHES
OPEN INTERVAL= 8.63 FEET
INITIAL WATER ABOVE TRANS.= 7.45 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
16	3	30	68	7.431	0.02	0.02	-1.79	-1.73
16	3	32	70	7.435	0.01	0.01	-1.90	-1.84
16	3	34	72	7.476	-0.03	-0.02	ERR	ERR
16	3	36	74	7.443	0.01	0.01	-2.23	-2.16
16	3	38	76	7.445	0.00	0.00	-2.39	-2.33
16	3	40	78	7.442	0.01	0.01	-2.14	-2.08

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30A

DATE 11/07/90

CASING DIAMETER 7.04 INCHES
SAND DIAMETER 10 INCHES
OPEN INTERVAL 8.63 FEET
INITIAL WATER ABOVE TRANS. 7.45 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			LOG HEAD RATIO		
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO	LOG HEAD			

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 4.04E-02 CM/SEC FALLING HEAD*

K= 3.20E-02 CM/SEC RISING HEAD**

OW-30B

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

DATE= 11/07/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	12.83 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD RATIO	LOG HEAD RATIO	
HOURS	MINUTES	SECONDS		(FEET)	(FEET)		LOG HEAD	

FALLING HEAD TEST

16	20	50	0	8.765	1.17	1.00	0	0.066498
16	20	52	2	8.703	1.10	0.95	-0.02384	0.042654
16	20	54	4	8.661	1.06	0.91	-0.04082	0.025676
16	20	56	6	8.619	1.02	0.87	-0.05849	0.008007
16	20	58	8	8.582	0.98	0.84	-0.07443	-0.00793
16	21	0	10	8.547	0.95	0.81	-0.09029	-0.02379
16	21	2	12	8.512	0.91	0.78	-0.10644	-0.03994
16	21	4	14	8.480	0.88	0.76	-0.12184	-0.05534
16	21	6	16	8.448	0.85	0.73	-0.13825	-0.07175
16	21	8	18	8.419	0.82	0.70	-0.15347	-0.08697
16	21	10	20	8.395	0.79	0.68	-0.16618	-0.09969
16	21	12	22	8.368	0.77	0.66	-0.18134	-0.11484
16	21	14	24	8.344	0.74	0.64	-0.19504	-0.12854
16	21	16	26	8.317	0.72	0.61	-0.21126	-0.14476
16	21	18	28	8.296	0.70	0.60	-0.22380	-0.15730
16	21	20	30	8.271	0.67	0.58	-0.23976	-0.17326
16	21	22	32	8.233	0.63	0.54	-0.26493	-0.19844
16	21	24	34	8.228	0.63	0.54	-0.26878	-0.20228
16	21	26	36	8.205	0.60	0.52	-0.28482	-0.21832
16	21	28	38	8.193	0.59	0.51	-0.29322	-0.22673
16	21	30	40	8.174	0.57	0.49	-0.30760	-0.24111
16	21	32	42	8.147	0.55	0.47	-0.32823	-0.26173
16	21	34	44	8.134	0.53	0.46	-0.33927	-0.27277
16	21	36	46	8.118	0.52	0.44	-0.35240	-0.28590
16	21	38	48	8.104	0.50	0.43	-0.36408	-0.29758
16	21	40	50	8.088	0.49	0.42	-0.37780	-0.31130
16	21	42	52	8.073	0.47	0.41	-0.39177	-0.32527
16	21	44	54	8.064	0.46	0.40	-0.40013	-0.33364
16	21	46	56	8.038	0.44	0.38	-0.42495	-0.35846
16	21	48	58	8.035	0.44	0.37	-0.42794	-0.36145
16	21	50	60	8.011	0.41	0.35	-0.45286	-0.38636
16	21	52	62	8.000	0.40	0.34	-0.46413	-0.39763
16	21	54	64	7.998	0.40	0.34	-0.46670	-0.40020
16	21	56	66	7.998	0.40	0.34	-0.46623	-0.39973

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

DATE= 11/07/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 12.83 FEET
 INITIAL WATER ABOVE TRANS.= 7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
16	21	58	68	7.988	0.39	0.33	-0.47786	-0.41136
16	22	0	70	7.953	0.35	0.30	-0.51840	-0.45190
16	22	2	72	7.938	0.34	0.29	-0.53700	-0.47050
16	22	4	74	7.943	0.34	0.29	-0.53180	-0.46530
16	22	6	76	7.930	0.33	0.28	-0.54817	-0.48167
16	22	8	78	7.919	0.32	0.27	-0.56253	-0.49604
16	22	10	80	7.905	0.30	0.26	-0.58226	-0.51576
16	22	12	82	7.905	0.31	0.26	-0.58165	-0.51515
16	22	14	84	7.919	0.32	0.27	-0.56224	-0.49574
16	22	16	86	7.877	0.28	0.24	-0.62327	-0.55678
16	22	18	88	7.874	0.27	0.23	-0.62936	-0.56287
16	22	20	90	7.859	0.26	0.22	-0.65246	-0.58596
16	22	22	92	7.887	0.29	0.25	-0.60808	-0.54159
16	22	24	94	7.856	0.26	0.22	-0.65752	-0.59102
16	22	26	96	7.849	0.25	0.21	-0.67044	-0.60394
16	22	28	98	7.837	0.24	0.20	-0.69115	-0.62465
16	22	30	100	7.829	0.23	0.20	-0.70594	-0.63944
16	22	32	102	7.827	0.23	0.19	-0.71043	-0.64393
16	22	34	104	7.814	0.21	0.18	-0.73624	-0.66974
16	22	36	106	7.821	0.22	0.19	-0.72167	-0.65517
16	22	38	108	7.810	0.21	0.18	-0.74504	-0.67855
16	22	40	110	7.835	0.24	0.20	-0.69470	-0.62820
16	22	42	112	7.799	0.20	0.17	-0.76834	-0.70184
16	22	44	114	7.792	0.19	0.17	-0.78217	-0.71567
16	22	46	116	7.786	0.19	0.16	-0.79645	-0.72996
16	22	55	125	7.803	0.20	0.17	-0.75952	-0.69302
16	23	0	130	7.755	0.16	0.13	-0.87530	-0.80880
16	23	5	135	7.747	0.15	0.13	-0.89936	-0.83287
16	23	10	140	7.738	0.14	0.12	-0.92687	-0.86037
16	23	15	145	7.728	0.13	0.11	-0.95768	-0.89119
16	23	20	150	7.723	0.12	0.11	-0.97774	-0.91124
16	23	25	155	7.715	0.12	0.10	-1.00519	-0.93869
16	23	30	160	7.740	0.14	0.12	-0.91950	-0.85300
16	23	35	165	7.705	0.10	0.09	-1.04590	-0.97940
16	23	40	170	7.698	0.10	0.08	-1.07343	-1.00694

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

DATE= 11/07/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	12.83 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
16	23	45	175	7.694	0.09	0.08	-1.09479	-1.02830
16	23	50	180	7.727	0.13	0.11	-0.96206	-0.89556
16	23	55	185	7.684	0.08	0.07	-1.14095	-1.07445
16	24	0	190	7.686	0.09	0.07	-1.13002	-1.06352
16	24	5	195	7.714	0.11	0.10	-1.00844	-0.94194
16	24	10	200	7.679	0.08	0.07	-1.16718	-1.10069
16	24	15	205	7.680	0.08	0.07	-1.16601	-1.09951
16	24	20	210	7.676	0.08	0.07	-1.18519	-1.11869
16	24	25	215	7.672	0.07	0.06	-1.21042	-1.14392
16	24	30	220	7.671	0.07	0.06	-1.21828	-1.15178
16	24	35	225	7.702	0.10	0.09	-1.05671	-0.99021
16	24	40	230	7.667	0.07	0.06	-1.24276	-1.17626
16	24	45	235	7.665	0.06	0.06	-1.25554	-1.18904
16	24	52	242	7.665	0.06	0.06	-1.25554	-1.18904
16	24	54	244	7.668	0.07	0.06	-1.23171	-1.16521
16	24	56	246	7.657	0.06	0.05	-1.30915	-1.24266
16	24	58	248	7.669	0.07	0.06	-1.22629	-1.15979
16	25	0	250	7.660	0.06	0.05	-1.29002	-1.22352
16	25	2	252	7.668	0.07	0.06	-1.23171	-1.16521
16	25	4	254	7.670	0.07	0.06	-1.22360	-1.15710
16	25	6	256	7.663	0.06	0.05	-1.27020	-1.20370
16	25	8	258	7.661	0.06	0.05	-1.27923	-1.21273
16	25	18	268	7.697	0.10	0.08	-1.07916	-1.01266
16	25	20	270	7.669	0.07	0.06	-1.22899	-1.16249

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

DATE= 11/07/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	12.83 FEET
INITIAL WATER ABOVE TRANS.-		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO		
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO	LOG HEAD	LOG HEAD	
RISING HEAD TEST									
16	25	22	0	6.721	0.88	1.00 **	0	-0.05616	
16	25	24	2	6.754	0.85	0.96	-0.01666	-0.07282	
16	25	26	4	6.780	0.82	0.93	-0.02975	-0.08592	
16	25	28	6	6.817	0.78	0.89	-0.04999	-0.10616	
16	25	30	8	6.829	0.77	0.88	-0.05671	-0.11288	
16	25	32	10	6.849	0.75	0.86	-0.06798	-0.12415	
16	25	34	12	6.878	0.72	0.82	-0.08519	-0.14136	
16	25	36	14	6.888	0.71	0.81	-0.09157	-0.14773	
16	25	38	16	6.907	0.69	0.79	-0.10325	-0.15942	
16	25	40	18	6.928	0.67	0.76	-0.11665	-0.17282	
16	25	42	20	6.941	0.66	0.75 **	-0.12520	-0.18137	
16	25	44	22	6.954	0.65	0.74	-0.13363	-0.18980	
16	25	46	24	6.976	0.62	0.71	-0.14831	-0.20448	
16	25	48	26	6.990	0.61	0.69	-0.15828	-0.21445	
16	25	50	28	7.007	0.59	0.68	-0.17052	-0.22669	
16	25	52	30	7.024	0.58	0.65	-0.18377	-0.23993	
16	25	54	32	7.035	0.57	0.64	-0.19161	-0.24778	
16	25	56	34	7.057	0.54	0.62	-0.20877	-0.26494	
16	25	58	36	7.064	0.54	0.61	-0.21447	-0.27064	
16	26	0	38	7.088	0.51	0.58	-0.23458	-0.29075	
16	26	2	40	7.095	0.51	0.58	-0.24026	-0.29643	
16	26	4	42	7.109	0.49	0.56	-0.25300	-0.30916	
16	26	6	44	7.119	0.48	0.55	-0.26163	-0.31780	
16	26	8	46	7.132	0.47	0.53	-0.27342	-0.32959	
16	26	10	48	7.148	0.45	0.51	-0.28903	-0.34520	
16	26	12	50	7.156	0.44	0.50	-0.29674	-0.35291	
16	26	14	52	7.181	0.42	0.48	-0.32161	-0.37777	
16	26	16	54	7.182	0.42	0.48	-0.32250	-0.37866	
16	26	18	56	7.183	0.42	0.47	-0.32361	-0.37978	
16	26	20	58	7.201	0.40	0.45	-0.34234	-0.39851	
16	26	22	60	7.211	0.39	0.44	-0.35369	-0.40986	
16	26	24	62	7.231	0.37	0.42	-0.37733	-0.43350	
16	26	26	64	7.233	0.37	0.42	-0.37961	-0.43578	
16	26	28	66	7.248	0.35	0.40	-0.39699	-0.45316	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

DATE= 11/07/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	12.83 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
16	26	30	68	7.265	0.33	0.38	-0.41926	-0.47543
16	26	32	70	7.276	0.32	0.37	-0.43285	-0.48901
16	26	34	72	7.267	0.33	0.38	-0.42094	-0.47710
16	26	36	74	7.282	0.32	0.36	-0.44097	-0.49714
16	26	38	76	7.298	0.30	0.34	-0.46383	-0.51999
16	26	40	78	7.291	0.31	0.35	-0.45406	-0.51022
16	26	42	80	7.307	0.29	0.33	-0.47763	-0.53379
16	26	44	82	7.309	0.29	0.33	-0.47986	-0.53603
16	26	46	84	7.341	0.26	0.29	-0.53079	-0.58696
16	26	48	86	7.331	0.27	0.31	-0.51418	-0.57035
16	26	50	88	7.352	0.25	0.28	-0.54919	-0.60536
16	26	52	90	7.359	0.24	0.27	-0.56138	-0.61755
16	26	54	92	7.354	0.25	0.28	-0.55372	-0.60989
16	26	56	94	7.352	0.25	0.28	-0.54994	-0.60611
16	26	58	96	7.369	0.23	0.26	-0.58075	-0.63692
16	27	0	98	7.372	0.23	0.26	-0.58603	-0.64220
16	27	2	100	7.376	0.22	0.26	-0.59304	-0.64921
16	27	4	102	7.382	0.22	0.25	-0.60613	-0.66230
16	27	6	104	7.389	0.21	0.24	-0.62006	-0.67623
16	27	8	106	7.415	0.18	0.21	-0.67770	-0.73386
16	27	10	108	7.429	0.17	0.20	-0.70966	-0.76583
16	27	12	110	7.413	0.19	0.21	-0.67217	-0.72834
16	27	14	112	7.416	0.18	0.21	-0.67820	-0.73437
16	27	16	114	7.425	0.18	0.20	-0.70052	-0.75668
16	27	18	116	7.422	0.18	0.20	-0.69260	-0.74877
16	27	20	118	7.429	0.17	0.19	-0.71021	-0.76638
16	27	22	120	7.435	0.17	0.19	-0.72629	-0.78246
16	27	24	122	7.471	0.13	0.15	-0.83340	-0.88957
16	27	26	124	7.453	0.15	0.17	-0.77592	-0.83209
16	27	28	126	7.450	0.15	0.17	-0.76652	-0.82269
16	27	30	128	7.478	0.12	0.14	-0.85795	-0.91411
16	27	32	130	7.458	0.14	0.16	-0.79271	-0.84888
16	27	34	132	7.467	0.13	0.15	-0.81918	-0.87535
16	27	36	134	7.475	0.13	0.14	-0.84662	-0.90279
16	27	38	136	7.478	0.12	0.14	-0.85642	-0.91259

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

DATE= 11/07/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	12.83 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
16	27	40	138	7.514	0.09	0.10	-1.01036	-1.06653
16	27	42	140	7.514	0.09	0.10	-1.00927	-1.06544
16	27	44	142	7.520	0.08	0.09	-1.04074	-1.09691
16	27	46	144	7.518	0.08	0.09	-1.02811	-1.08427
16	27	48	146	7.489	0.11	0.13	-0.89883	-0.95500
16	27	50	148	7.503	0.10	0.11	-0.95627	-1.01244
16	27	52	150	7.532	0.07	0.08	-1.11147	-1.16764
16	27	54	152	7.533	0.07	0.08	-1.11699	-1.17316
16	27	56	154	7.507	0.09	0.11	-0.97490	-1.03106
16	27	58	156	7.510	0.09	0.10	-0.98812	-1.04428
16	28	0	158	7.512	0.09	0.10	-0.99857	-1.05473
16	28	2	160	7.543	0.06	0.06	-1.18775	-1.24392
16	28	4	162	7.553	0.05	0.05	-1.26837	-1.32454
16	28	6	164	7.524	0.08	0.09	-1.06470	-1.12087
16	28	8	166	7.533	0.07	0.08	-1.11699	-1.17316
16	28	10	168	7.539	0.06	0.07	-1.15927	-1.21544
16	28	12	170	7.531	0.07	0.08	-1.10737	-1.16354
16	28	14	172	7.529	0.07	0.08	-1.09006	-1.14623
16	28	16	174	7.540	0.06	0.07	-1.16700	-1.22317
16	28	18	176	7.543	0.06	0.06	-1.18775	-1.24392

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

DATE= 11/07/90

CASING DIAMETER= 4 INCHES
SAND DIAMETER= 10 INCHES
OPEN INTERVAL= 12.83 FEET
INITIAL WATER ABOVE TRANS.= 7.6 FEET

24-HR CLOCK TIME	HOURS	MINUTES	SECONDS	WATER			LOG HEAD RATIO	LOG HEAD RATIO	LOG HEAD
				ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)			

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 2.16E-03 CM/SEC FALLING HEAD*

K= 1.63E-03 CM/SEC RISING HEAD**

OW-31

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-31

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.8 FEET
 INITIAL WATER ABOVE TRANS.= 10.65 FEET

24-HR CLOCK TIME			ELAPSED	WATER			LOG	
HOURS	MINUTES	SECONDS	TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
FALLING HEAD TEST								
20	47	38	0	12.006	1.36	1.00	0.00	0.13
20	47	40	2	11.889	1.24	0.91	-0.04	0.09
20	47	42	4	11.746	1.10	0.81	-0.09	0.04
20	47	44	6	11.625	0.98	0.72	-0.14	-0.01
20	47	46	8	11.522	0.87	0.64	-0.19	-0.06
20	47	48	10	11.444	0.79	0.59	-0.23	-0.10
20	47	50	12	11.354	0.70	0.52	-0.28	-0.15
20	47	52	14	11.279	0.63	0.46	-0.33	-0.20
20	47	54	16	11.219	0.57	0.42	-0.38	-0.24
20	47	56	18	11.177	0.53	0.39	-0.41	-0.28
20	47	58	20	11.116	0.47	0.34	-0.46	-0.33
20	48	0	22	11.071	0.42	0.31	-0.51	-0.38
20	48	2	24	11.032	0.38	0.28	-0.55	-0.42
20	48	4	26	11.002	0.35	0.26	-0.59	-0.45
20	48	6	28	10.983	0.33	0.25	-0.61	-0.48
20	48	8	30	10.947	0.30	0.22	-0.66	-0.53
20	48	10	32	10.921	0.27	0.20	-0.70	-0.57
20	48	12	34	10.893	0.24	0.18	-0.75	-0.61
20	48	14	36	10.885	0.23	0.17	-0.76	-0.63
20	48	16	38	10.866	0.22	0.16	-0.80	-0.67
20	48	18	40	10.845	0.19	0.14	-0.84	-0.71
20	48	20	42	10.833	0.18	0.13	-0.87	-0.74
20	48	22	44	10.817	0.17	0.12	-0.91	-0.78
20	48	24	46	10.792	0.14	0.11	-0.98	-0.85
20	48	26	48	10.793	0.14	0.11	-0.98	-0.84
20	48	28	50	10.771	0.12	0.09	-1.05	-0.92
20	48	30	52	10.777	0.13	0.09	-1.03	-0.89
20	48	32	54	10.757	0.11	0.08	-1.10	-0.97
20	48	34	56	10.757	0.11	0.08	-1.10	-0.97
20	48	36	58	10.748	0.10	0.07	-1.14	-1.01
20	48	38	60	10.740	0.09	0.07	-1.18	-1.05
20	48	40	62	10.734	0.08	0.06	-1.21	-1.08
20	48	42	64	10.731	0.08	0.06	-1.22	-1.09
20	48	44	66	10.724	0.07	0.05	-1.26	-1.13

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-31

DATE= 11/05/90

CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.8 FEET
 INITIAL WATER ABOVE TRANS.= 10.65 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
20	48	46	68	10.702	0.05	0.04	-1.42	-1.28
20	48	48	70	10.695	0.05	0.03	-1.48	-1.34
20	48	50	72	10.703	0.05	0.04	-1.41	-1.27
20	48	52	74	10.705	0.05	0.04	-1.39	-1.26
20	48	54	76	10.693	0.04	0.03	-1.49	-1.36
20	48	56	78	10.688	0.04	0.03	-1.55	-1.42
20	48	58	80	10.699	0.05	0.04	-1.44	-1.31
20	49	0	82	10.692	0.04	0.03	-1.51	-1.38
20	49	2	84	10.674	0.02	0.02	-1.75	-1.61
20	49	4	86	10.677	0.03	0.02	-1.71	-1.58
20	49	6	88	10.670	0.02	0.01	-1.83	-1.70
20	49	8	90	10.673	0.02	0.02	-1.76	-1.63
20	49	10	92	10.670	0.02	0.01	-1.83	-1.70
20	49	20	102	10.673	0.02	0.02	-1.77	-1.64
20	49	25	107	10.671	0.02	0.02	-1.82	-1.69
20	49	30	112	10.674	0.02	0.02	-1.75	-1.62
20	49	35	117	10.675	0.02	0.02	-1.74	-1.60
20	49	40	122	10.655	0.01	0.00	-2.40	-2.27
20	49	45	127	10.671	0.02	0.02	-1.82	-1.69
20	49	50	132	10.654	0.00	0.00	-2.49	-2.35
20	49	55	137	10.658	0.01	0.01	-2.22	-2.09
20	50	0	142	10.651	0.00	0.00	-3.27	-3.14
20	50	5	147	10.650	0.00	0.00	-3.71	-3.58
20	50	10	152	10.650	0.00	0.00	-3.44	-3.30
20	50	15	157	10.655	0.01	0.00	-2.42	-2.29
20	50	20	162	10.652	0.00	0.00	-2.86	-2.73
20	50	25	167	10.654	0.00	0.00	-2.53	-2.40
20	50	30	172	10.656	0.01	0.00	-2.32	-2.19
20	50	36	178	10.668	0.02	0.01	-1.87	-1.73
20	50	38	180	10.658	0.01	0.01	-2.24	-2.10
20	50	40	182	10.673	0.02	0.02	-1.77	-1.64
20	50	42	184	10.670	0.02	0.02	-1.82	-1.69
20	50	56	198	10.671	0.02	0.02	-1.80	-1.67

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-31

DATE = 11/05/90
 CASING DIAMETER = 4 INCHES
 SAND DIAMETER = 10 INCHES
 OPEN INTERVAL = 7.8 FEET
 INITIAL WATER ABOVE TRANS. = 10.65 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
20	51	2	0	9.187	1.46	1.00	**	0.00
20	51	4	2	9.371	1.28	0.87	-0.06	0.11
20	51	6	4	9.512	1.14	0.78	-0.11	0.06
20	51	8	6	9.628	1.02	0.70	-0.16	0.01
20	51	10	8	9.743	0.91	0.62	-0.21	-0.04
20	51	12	10	9.819	0.83	0.57	-0.25	-0.08
20	51	14	12	9.921	0.73	0.50	-0.30	-0.14
20	51	16	14	9.965	0.68	0.47	-0.33	-0.16
20	51	18	16	10.036	0.61	0.42	-0.38	-0.21
20	51	20	18	10.082	0.57	0.39	-0.41	-0.25
20	51	22	20	10.139	0.51	0.35	-0.46	-0.29
20	51	24	22	10.175	0.47	0.32	-0.49	-0.32
20	51	26	24	10.238	0.41	0.28	-0.55	-0.39
20	51	28	26	10.277	0.37	0.26	-0.59	-0.43
20	51	32	30	10.325	0.32	0.22	-0.65	-0.49
20	51	34	32	10.353	0.30	0.20	-0.69	-0.53
20	51	36	34	10.380	0.27	0.18	-0.73	-0.57
20	51	38	36	10.397	0.25	0.17	-0.76	-0.60
20	51	40	38	10.412	0.24	0.16	**	-0.79
20	51	42	40	10.437	0.21	0.15	-0.84	-0.67
20	51	44	42	10.461	0.19	0.13	-0.89	-0.72
20	51	46	44	10.475	0.17	0.12	-0.92	-0.76
20	51	48	46	10.487	0.16	0.11	-0.95	-0.79
20	51	50	48	10.486	0.16	0.11	-0.95	-0.79
20	51	52	50	10.499	0.15	0.10	-0.99	-0.82
20	51	54	52	10.521	0.13	0.09	-1.06	-0.89
20	51	56	54	10.518	0.13	0.09	-1.05	-0.88
20	51	58	56	10.545	0.10	0.07	-1.14	-0.98
20	52	0	58	10.553	0.10	0.07	-1.18	-1.01
20	52	2	60	10.542	0.11	0.07	-1.13	-0.97
20	52	4	62	10.550	0.10	0.07	-1.17	-1.00
20	52	6	64	10.572	0.08	0.05	-1.28	-1.11
20	52	8	66	10.581	0.07	0.05	-1.32	-1.16
20	52	10	68	10.570	0.08	0.05	-1.26	-1.10

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-31

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.8 FEET
 INITIAL WATER ABOVE TRANS.= 10.65 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
20	52	12	70	10.596	0.05	0.04	-1.43	-1.27
20	52	14	72	10.581	0.07	0.05	-1.32	-1.16
20	52	16	74	10.602	0.05	0.03	-1.49	-1.32
20	52	18	76	10.604	0.05	0.03	-1.51	-1.34
20	52	20	78	10.612	0.04	0.03	-1.59	-1.42
20	52	22	80	10.598	0.05	0.04	-1.45	-1.28
20	52	24	82	10.623	0.03	0.02	-1.74	-1.57
20	52	26	84	10.623	0.03	0.02	-1.73	-1.57
20	52	28	86	10.630	0.02	0.01	-1.86	-1.69
20	52	30	88	10.610	0.04	0.03	-1.56	-1.40
20	52	32	90	10.628	0.02	0.01	-1.83	-1.66
20	52	34	92	10.634	0.02	0.01	-1.97	-1.81
20	52	36	94	10.635	0.01	0.01	-1.99	-1.82
20	52	38	96	10.621	0.03	0.02	-1.71	-1.54
20	52	40	98	10.626	0.02	0.02	-1.78	-1.62
20	52	42	100	10.627	0.02	0.02	-1.81	-1.64
20	52	44	102	10.631	0.02	0.01	-1.89	-1.73
20	52	46	104	10.631	0.02	0.01	-1.88	-1.72
20	52	48	106	10.635	0.02	0.01	-1.98	-1.82
20	52	50	108	10.638	0.01	0.01	-2.10	-1.94

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-31

DATE 11/05/90
CASING DIAMETER 4 INCHES
SAND DIAMETER 10 INCHES
OPEN INTERVAL 7.8 FEET
INITIAL WATER ABOVE TRANS. 10.65 FEET

			WATER			LOG	
24-HR CLOCK TIME	ELAPSED	TIME	ABOVE	TRANS.	HEAD	HEAD	LOG
HOURS	MINUTES	SECONDS	(SEC)	(FEET)	(FEET)	RATIO	HEAD

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 6.49E-03 CM/SEC FALLING HEAD*

K= 7.59E-03 CM/SEC RISING HEAD**

OW-32

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 5 FEET
 INITIAL WATER ABOVE TRANS.= 5.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
FALLING HEAD TEST									
21	55	14	0	7.545	1.62	1.00	0.00	0.21	
21	55	16	2	7.504	1.58	0.98	-0.01	0.20	
21	55	18	4	7.481	1.56	0.96	-0.02	0.19	
21	55	20	6	7.473	1.55	0.96	-0.02	0.19	
21	55	22	8	7.456	1.54	0.95	-0.02	0.19	
21	55	24	10	7.441	1.52	0.94	-0.03	0.18	
21	55	26	12	7.429	1.51	0.93	-0.03	0.18	
21	55	28	14	7.421	1.50	0.92	-0.03	0.18	
21	55	30	16	7.412	1.49	0.92	-0.04	0.17	
21	55	32	18	7.401	1.48	0.91	-0.04	0.17	
21	55	34	20	7.387	1.47	0.90	-0.04	0.17	
21	55	36	22	7.388	1.47	0.90	-0.04	0.17	
21	55	38	24	7.377	1.46	0.90	-0.05	0.16	
21	55	40	26	7.363	1.44	0.89	-0.05	0.16	
21	55	42	28	7.352	1.43	0.88	-0.05	0.16	
21	55	44	30	7.343	1.42	0.88	-0.06	0.15	
21	55	46	32	7.336	1.42	0.87	-0.06	0.15	
21	55	48	34	7.332	1.41	0.87	-0.06	0.15	
21	55	50	36	7.319	1.40	0.86	-0.06	0.15	
21	55	52	38	7.317	1.40	0.86	-0.07	0.15	
21	55	54	40	7.300	1.38	0.85	-0.07	0.14	
21	55	56	42	7.293	1.37	0.85	-0.07	0.14	
21	55	58	44	7.292	1.37	0.84	-0.07	0.14	
21	56	0	46	7.279	1.36	0.84	-0.08	0.13	
21	56	2	48	7.258	1.34	0.82	-0.08	0.13	
21	56	4	50	7.268	1.35	0.83	-0.08	0.13	
21	56	6	52	7.263	1.34	0.83	-0.08	0.13	
21	56	8	54	7.252	1.33	0.82	-0.09	0.12	
21	56	10	56	7.245	1.32	0.82	-0.09	0.12	
21	56	12	58	7.232	1.31	0.81	-0.09	0.12	
21	56	14	60	7.226	1.31	0.80	-0.09	0.12	
21	56	16	62	7.219	1.30	0.80	-0.10	0.11	
21	56	18	64	7.208	1.29	0.79	-0.10	0.11	
21	56	20	66	7.207	1.29	0.79	-0.10	0.11	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	5 FEET
INITIAL WATER ABOVE TRANS.=		5.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO				
21	56	22	68	7.196	1.28	0.79	-0.11	0.11	
21	56	24	70	7.182	1.26	0.78	-0.11	0.10	
21	56	26	72	7.186	1.27	0.78	-0.11	0.10	
21	56	28	74	7.179	1.26	0.77	-0.11	0.10	
21	56	30	76	7.164	1.24	0.77	-0.12	0.09	
21	56	40	86	7.137	1.22	0.75	-0.13	0.09	
21	56	45	91	7.111	1.19	0.73	-0.13	0.08	
21	56	50	96	7.095	1.18	0.72	-0.14	0.07	
21	56	55	101	7.080	1.16	0.71	-0.15	0.06	
21	57	0	106	7.064	1.14	0.70	-0.15	0.06	
21	57	5	111	7.047	1.13	0.69	-0.16	0.05	
21	57	10	116	7.026	1.11	0.68	-0.17	0.04	
21	57	15	121	7.011	1.09	0.67	-0.17	0.04	
21	57	20	126	6.995	1.07	0.66	-0.18	0.03	
21	57	25	131	6.980	1.06	0.65	-0.19	0.03	
21	57	30	136	6.965	1.04	0.64	-0.19	0.02	
21	57	35	141	6.945	1.02	0.63	-0.20	0.01	
21	57	40	146	6.929	1.01	0.62	-0.21	0.00	
21	57	45	151	6.914	0.99	0.61	-0.21	-0.00	
21	58	0	166	6.879	0.96	0.59	-0.23	-0.02	
21	58	15	181	6.835	0.91	0.56	-0.25	-0.04	
21	58	30	196	6.797	0.88	0.54	-0.27	-0.06	
21	58	45	211	6.763	0.84	0.52	-0.28	-0.07	
21	59	0	226	6.718	0.80	0.49	-0.31	-0.10	
21	59	15	241	6.693	0.77	0.48	-0.32	-0.11	
21	59	30	256	6.652	0.73	0.45	-0.35	-0.14	
21	59	45	271	6.623	0.70	0.43	-0.36	-0.15	
22	0	0	286	6.599	0.68	0.42	-0.38	-0.17	
22	0	15	301	6.573	0.65	0.40	-0.40	-0.18	
22	0	30	316	6.542	0.62	0.38	-0.42	-0.21	
22	0	45	331	6.515	0.60	0.37	-0.44	-0.23	
22	1	0	346	6.488	0.57	0.35	-0.46	-0.25	
22	1	30	376	6.450	0.53	0.33	-0.49	-0.28	
22	2	0	406	6.404	0.48	0.30	-0.53	-0.32	
22	2	30	436	6.372	0.45	0.28	-0.56	-0.35	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 5 FEET
 INITIAL WATER ABOVE TRANS.= 5.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
22	3	0	466	6.335	0.41	0.26	-0.59	-0.38	
22	3	30	496	6.310	0.39	0.24	-0.62	-0.41	
22	4	0	526	6.277	0.36	0.22	-0.66	-0.45	
22	4	30	556	6.258	0.34	0.21	-0.68	-0.47	
22	5	0	586	6.228	0.31	0.19	-0.72	-0.51	
22	5	30	616	6.221	0.30	0.19	-0.73	-0.52	
22	6	0	646	6.211	0.29	0.18	-0.75	-0.54	
22	6	30	676	6.193	0.27	0.17	-0.77	-0.56	
22	7	0	706	6.186	0.27	0.16	-0.79	-0.58	
22	7	30	736	6.186	0.27	0.16	-0.79	-0.57	
22	8	0	766	6.170	0.25	0.15	-0.81	-0.60	
22	8	30	796	6.165	0.24	0.15	-0.82	-0.61	
22	9	0	826	6.166	0.25	0.15	-0.82	-0.61	
22	9	30	856	6.155	0.23	0.14	-0.84	-0.63	
22	10	0	886	6.158	0.24	0.15	-0.84	-0.62	
22	10	30	916	6.163	0.24	0.15	-0.83	-0.61	
22	10	54	940	6.154	0.23	0.14	-0.84	-0.63	
22	10	56	942	6.162	0.24	0.15	-0.83	-0.62	
22	10	58	944	6.149	0.23	0.14	-0.85	-0.64	
22	11	0	946	6.150	0.23	0.14	-0.85	-0.64	
22	11	2	948	6.160	0.24	0.15	-0.83	-0.62	
22	11	4	950	6.163	0.24	0.15	-0.83	-0.61	
22	11	14	960	6.167	0.25	0.15	-0.82	-0.61	
22	11	16	962	6.161	0.24	0.15	-0.83	-0.62	
22	11	18	964	6.163	0.24	0.15	-0.82	-0.61	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	5 FEET
INITIAL WATER ABOVE TRANS.=		5.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)			

RISING HEAD TEST

22	11	26	0	4.422	1.50	1.00	0.00	0.18
22	11	28	2	4.436	1.48	0.99	-0.00	0.17
22	11	30	4	4.451	1.47	0.98	-0.01	0.17
22	11	32	6	4.474	1.45	0.97	-0.02	0.16
22	11	34	8	4.474	1.45	0.97	-0.02	0.16
22	11	36	10	4.501	1.42	0.95	-0.02	0.15
22	11	38	12	4.497	1.42	0.95	-0.02	0.15
22	11	40	14	4.516	1.40	0.94	-0.03	0.15
22	11	42	16	4.517	1.40	0.94	-0.03	0.15
22	11	44	18	4.544	1.38	0.92	-0.04	0.14
22	11	46	20	4.559	1.36	0.91	-0.04	0.13
22	11	48	22	4.559	1.36	0.91	-0.04	0.13
22	11	50	24	4.567	1.35	0.90	-0.04	0.13
22	11	52	26	4.579	1.34	0.90 **	-0.05	0.13
22	11	54	28	4.586	1.33	0.89	-0.05	0.13
22	11	56	30	4.587	1.33	0.89	-0.05	0.12
22	11	58	32	4.604	1.32	0.88	-0.06	0.12
22	12	0	34	4.612	1.31	0.87	-0.06	0.12
22	12	2	36	4.625	1.30	0.86	-0.06	0.11
22	12	4	38	4.629	1.29	0.86	-0.06	0.11
22	12	6	40	4.643	1.28	0.85	-0.07	0.11
22	12	8	42	4.655	1.27	0.84	-0.07	0.10
22	12	10	44	4.664	1.26	0.84	-0.08	0.10
22	12	12	46	4.661	1.26	0.84	-0.08	0.10
22	12	14	48	4.681	1.24	0.83	-0.08	0.09
22	12	16	50	4.685	1.24	0.82	-0.08	0.09
22	12	18	52	4.695	1.23	0.82	-0.09	0.09
22	12	20	54	4.702	1.22	0.81	-0.09	0.09
22	12	22	56	4.711	1.21	0.81 **	-0.09	0.08
22	12	24	58	4.724	1.20	0.80	-0.10	0.08
22	12	26	60	4.729	1.19	0.79	-0.10	0.08
22	12	28	62	4.732	1.19	0.79	-0.10	0.07
22	12	30	64	4.742	1.18	0.79	-0.10	0.07
22	12	32	66	4.750	1.17	0.78	-0.11	0.07

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 5 FEET
 INITIAL WATER ABOVE TRANS.= 5.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
22	12	34	68	4.766	1.15	0.77	-0.11	0.06
22	12	36	70	4.777	1.14	0.76	-0.12	0.06
22	12	38	72	4.772	1.15	0.77	-0.12	0.06
22	12	40	74	4.777	1.14	0.76	-0.12	0.06
22	12	42	76	4.795	1.13	0.75	-0.12	0.05
22	12	44	78	4.805	1.11	0.74	-0.13	0.05
22	12	46	80	4.811	1.11	0.74	-0.13	0.05
22	12	48	82	4.814	1.11	0.74	-0.13	0.04
22	12	50	84	4.825	1.09	0.73	-0.14	0.04
22	12	52	86	4.825	1.09	0.73	-0.14	0.04
22	12	54	88	4.844	1.08	0.72	-0.14	0.03
22	12	56	90	4.848	1.07	0.72	-0.15	0.03
22	12	58	92	4.853	1.07	0.71	-0.15	0.03
22	13	0	94	4.862	1.06	0.71	-0.15	0.02
22	13	2	96	4.870	1.05	0.70	-0.15	0.02
22	13	4	98	4.889	1.03	0.69	-0.16	0.01
22	13	6	100	4.882	1.04	0.69	-0.16	0.02
22	13	8	102	4.891	1.03	0.69	-0.16	0.01
22	13	10	104	4.903	1.02	0.68	-0.17	0.01
22	13	12	106	4.908	1.01	0.68	-0.17	0.01
22	13	14	108	4.916	1.00	0.67	-0.17	0.00
22	13	16	110	4.924	1.00	0.66	-0.18	-0.00
22	13	18	112	4.924	1.00	0.66	-0.18	-0.00
22	13	20	114	4.944	0.98	0.65	-0.19	-0.01
22	13	22	116	4.941	0.98	0.65	-0.18	-0.01
22	13	24	118	4.948	0.97	0.65	-0.19	-0.01
22	13	26	120	4.960	0.96	0.64	-0.19	-0.02
22	13	28	122	4.965	0.96	0.64	-0.20	-0.02
22	13	30	124	4.971	0.95	0.63	-0.20	-0.02
22	13	32	126	4.977	0.94	0.63	-0.20	-0.03
22	13	34	128	4.983	0.94	0.63	-0.20	-0.03
22	13	36	130	4.993	0.93	0.62	-0.21	-0.03
22	13	38	132	4.997	0.92	0.62	-0.21	-0.03
22	13	40	134	5.002	0.92	0.61	-0.21	-0.04
22	13	42	136	5.009	0.91	0.61	-0.22	-0.04

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	5 FEET
INITIAL WATER ABOVE TRANS.=		5.92 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	RATIO			
22	13	44	138	5.015	0.91	0.60	-0.22	-0.04	
22	13	46	140	5.023	0.90	0.60	-0.22	-0.05	
22	13	48	142	5.031	0.89	0.59	-0.23	-0.05	
22	13	50	144	5.032	0.89	0.59	-0.23	-0.05	
22	13	52	146	5.041	0.88	0.59	-0.23	-0.06	
22	13	54	148	5.043	0.88	0.59	-0.23	-0.06	
22	13	56	150	5.055	0.87	0.58	-0.24	-0.06	
22	13	58	152	5.058	0.86	0.58	-0.24	-0.06	
22	14	15	169	5.119	0.80	0.53	-0.27	-0.10	
22	14	30	184	5.155	0.77	0.51	-0.29	-0.12	
22	14	45	199	5.200	0.72	0.48	-0.32	-0.14	
22	15	0	214	5.245	0.68	0.45	-0.35	-0.17	
22	15	15	229	5.269	0.65	0.43	-0.36	-0.19	
22	15	30	244	5.309	0.61	0.41	-0.39	-0.21	
22	15	45	259	5.338	0.58	0.39	-0.41	-0.24	
22	16	0	274	5.389	0.53	0.35	-0.45	-0.27	
22	16	15	289	5.415	0.50	0.34	-0.47	-0.30	
22	17	0	334	5.491	0.43	0.29	-0.54	-0.37	
22	17	30	364	5.555	0.37	0.24	-0.61	-0.44	
22	18	0	394	5.602	0.32	0.21	-0.67	-0.50	
22	18	30	424	5.632	0.29	0.19	-0.72	-0.54	
22	19	0	454	5.687	0.23	0.16	-0.81	-0.63	
22	19	30	484	5.713	0.21	0.14	-0.86	-0.68	
22	20	0	514	5.743	0.18	0.12	-0.93	-0.75	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90
CASING DIAMETER= 4 INCHES
SAND DIAMETER= 10 INCHES
OPEN INTERVAL= 5 FEET
INITIAL WATER ABOVE TRANS.= 5.92 FEET

24-HR CLOCK TIME	ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
		HOURS	MINUTES	SECONDS		

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 6.21E-04 CM/SEC FALLING HEAD*

K= 7.28E-04 CM/SEC RISING HEAD**

OW-36

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-36

DATE: 11/05/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10.00 INCHES
 OPEN LENGTH= 4.84 Ft
 INITIAL WATER ABOVE TRANS.= 9.51 Ft

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
FALLING HEAD TEST									
23	8	2	0	11.152	1.64	1.00	0.00	0.22	
23	8	4	2	10.793	1.28	0.78 **	-0.11	0.11	
23	8	6	4	10.669	1.16	0.71	-0.15	0.06	
23	8	8	6	10.557	1.05	0.64	-0.20	0.02	
23	8	10	8	10.472	0.96	0.59	-0.23	-0.02	
23	8	12	10	10.380	0.87	0.53	-0.28	-0.06	
23	8	14	12	10.311	0.80	0.49	-0.31	-0.10	
23	8	16	14	10.243	0.73	0.45	-0.35	-0.13	
23	8	18	16	10.187	0.68	0.41	-0.39	-0.17	
23	8	20	18	10.127	0.62	0.38	-0.43	-0.21	
23	8	22	20	10.100	0.59	0.36	-0.44	-0.23	
23	8	24	22	10.052	0.54	0.33	-0.48	-0.27	
23	8	26	24	10.009	0.50	0.30	-0.52	-0.30	
23	8	28	26	9.978	0.47	0.28	-0.55	-0.33	
23	8	30	28	9.953	0.44	0.27	-0.57	-0.35	
23	8	32	30	9.911	0.40	0.24 **	-0.61	-0.40	
23	8	34	32	9.914	0.40	0.25	-0.61	-0.39	
23	8	36	34	9.859	0.35	0.21	-0.67	-0.46	
23	8	38	36	9.840	0.33	0.20	-0.70	-0.48	
23	8	40	38	9.825	0.31	0.19	-0.72	-0.50	
23	8	42	40	9.801	0.29	0.18	-0.75	-0.54	
23	8	44	42	9.785	0.27	0.17	-0.78	-0.56	
23	8	46	44	9.769	0.26	0.16	-0.80	-0.59	
23	8	48	46	9.754	0.24	0.15	-0.83	-0.61	
23	8	50	48	9.738	0.23	0.14	-0.86	-0.64	
23	8	52	50	9.754	0.24	0.15	-0.83	-0.61	
23	8	54	52	9.724	0.21	0.13	-0.88	-0.67	
23	8	56	54	9.717	0.21	0.13	-0.90	-0.68	
23	8	58	56	9.701	0.19	0.12	-0.93	-0.72	
23	9	0	58	9.696	0.19	0.11	-0.95	-0.73	
23	9	2	60	9.687	0.18	0.11	-0.97	-0.75	
23	9	4	62	9.683	0.17	0.11	-0.98	-0.76	
23	9	6	64	9.676	0.17	0.10	-1.00	-0.78	
23	9	8	66	9.680	0.17	0.10	-0.99	-0.77	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-36

DATE: 11/05/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10.00 INCHES
 OPEN LENGTH= 4.84 Ft
 INITIAL WATER ABOVE TRANS.= 9.51 Ft

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
23	9	10	68	9.664	0.15	0.09	-1.03	-0.81
23	9	12	70	9.667	0.16	0.10	-1.02	-0.80
23	9	14	72	9.665	0.15	0.09	-1.03	-0.81
23	9	16	74	9.653	0.14	0.09	-1.06	-0.84
23	9	18	76	9.645	0.13	0.08	-1.09	-0.87
23	9	20	78	9.657	0.15	0.09	-1.05	-0.83
23	9	22	80	9.666	0.16	0.09	-1.02	-0.81
23	9	24	82	9.641	0.13	0.08	-1.10	-0.88
23	9	26	84	9.635	0.12	0.08	-1.12	-0.90
23	9	28	86	9.640	0.13	0.08	-1.10	-0.89
23	9	30	88	9.633	0.12	0.07	-1.13	-0.91
23	9	32	90	9.639	0.13	0.08	-1.10	-0.89
23	9	34	92	9.625	0.12	0.07	-1.15	-0.94
23	9	36	94	9.631	0.12	0.07	-1.13	-0.92
23	9	38	96	9.631	0.12	0.07	-1.13	-0.92
23	9	42	100	9.622	0.11	0.07	-1.17	-0.95
23	9	42	100	9.629	0.12	0.07	-1.14	-0.92
23	9	44	102	9.629	0.12	0.07	-1.14	-0.92
23	9	46	104	9.613	0.10	0.06	-1.20	-0.99
23	9	48	106	9.623	0.11	0.07	-1.16	-0.95
23	9	50	108	9.610	0.10	0.06	-1.22	-1.00
23	9	52	110	9.620	0.11	0.07	-1.17	-0.96
23	9	54	112	9.606	0.10	0.06	-1.23	-1.02
23	9	56	114	9.604	0.09	0.06	-1.24	-1.03
23	9	58	116	9.606	0.10	0.06	-1.23	-1.02
23	10	0	118	9.617	0.11	0.06	-1.19	-0.97
23	10	2	120	9.601	0.09	0.06	-1.26	-1.04
23	10	4	122	9.598	0.09	0.05	-1.27	-1.06
23	10	6	124	9.601	0.09	0.06	-1.26	-1.04
23	10	8	126	9.607	0.10	0.06	-1.23	-1.01
23	10	10	128	9.595	0.08	0.05	-1.29	-1.07
23	10	12	130	9.596	0.09	0.05	-1.28	-1.06
23	10	14	132	9.593	0.08	0.05	-1.29	-1.08
23	10	16	134	9.593	0.08	0.05	-1.30	-1.08
23	10	18	136	9.610	0.10	0.06	-1.22	-1.00

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-36

DATE: 11/05/90
CASING DIAMETER= 7.04 INCHES
SAND DIAMETER= 10.00 INCHES
OPEN LENGTH= 4.84 Ft
INITIAL WATER ABOVE TRANS.= 9.51 Ft

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
23	10	20	138	9.595	0.08	0.05	-1.29	-1.07
23	10	22	140	9.608	0.10	0.06	-1.22	-1.01
23	10	24	142	9.603	0.09	0.06	-1.25	-1.03
23	10	36	154	9.587	0.08	0.05	-1.33	-1.11
23	10	38	156	9.586	0.08	0.05	-1.33	-1.12
23	10	40	158	9.442	-0.07	-0.04	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-36

DATE: 11/05/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10.00 INCHES
 OPEN LENGTH= 4.84 Ft
 INITIAL WATER ABOVE TRANS.= 9.51 Ft

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
23	10	42	0	8.099	1.41	1.00	0.00	0.15
23	10	44	2	8.224	1.29	0.91	-0.04	0.11
23	10	46	4	8.372	1.14	0.81	-0.09	0.06
23	10	48	6	8.497	1.01	0.72	-0.14	0.01
23	10	50	8	8.606	0.90	0.64	-0.19	-0.04
23	10	52	10	8.703	0.81	0.57	-0.24	-0.09
23	10	54	12	8.799	0.71	0.50	-0.30	-0.15
23	10	56	14	8.884	0.63	0.44	-0.35	-0.20
23	10	58	16	8.937	0.57	0.41	-0.39	-0.24
23	11	0	18	9.001	0.51	0.36	-0.44	-0.29
23	11	2	20	9.047	0.46	0.33	-0.48	-0.33
23	11	4	22	9.093	0.42	0.30	-0.53	-0.38
23	11	6	24	9.135	0.38	0.27	-0.58	-0.43
23	11	8	26	9.166	0.34	0.24	-0.61	-0.46
23	11	10	28	9.192	0.32	0.23	-0.65	-0.50
23	11	12	30	9.222	0.29	0.20	-0.69	-0.54
23	11	14	32	9.249	0.26	0.18	-0.73	-0.58
23	11	16	34	9.263	0.25	0.17	-0.76	-0.61
23	11	18	36	9.281	0.23	0.16	-0.79	-0.64
23	11	20	38	9.300	0.21	0.15	-0.83	-0.68
23	11	22	40	9.319	0.19	0.14	-0.87	-0.72
23	11	24	42	9.328	0.18	0.13	-0.89	-0.74
23	11	26	44	9.348	0.16	0.11	-0.94	-0.79
23	11	28	46	9.370	0.14	0.10	-1.00	-0.85
23	11	30	48	9.370	0.14	0.10	-1.00	-0.85
23	11	32	50	9.393	0.12	0.08	-1.08	-0.93
23	11	34	52	9.383	0.13	0.09	-1.05	-0.90
23	11	36	54	9.395	0.12	0.08	-1.09	-0.94
23	11	38	56	9.409	0.10	0.07	-1.14	-0.99
23	11	40	58	9.412	0.10	0.07	-1.16	-1.01
23	11	42	60	9.415	0.09	0.07	-1.17	-1.02
23	11	44	62	9.422	0.09	0.06	-1.21	-1.06
23	11	46	64	9.437	0.07	0.05	-1.28	-1.14
23	11	48	66	9.436	0.07	0.05	-1.28	-1.13

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-36

DATE: 11/05/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10.00 INCHES
 OPEN LENGTH= 4.84 Ft
 INITIAL WATER ABOVE TRANS.= 9.51 Ft

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
23	11	50	68	9.450	0.06	0.04	-1.37	-1.22
23	11	52	70	9.464	0.05	0.03	-1.49	-1.34
23	11	54	72	9.442	0.07	0.05	-1.32	-1.17
23	11	56	74	9.446	0.06	0.05	-1.34	-1.19
23	11	58	76	9.446	0.06	0.05	-1.34	-1.19
23	12	0	78	9.450	0.06	0.04	-1.37	-1.22
23	12	2	80	9.456	0.05	0.04	-1.42	-1.27
23	12	4	82	9.460	0.05	0.04	-1.45	-1.30
23	12	6	84	9.482	0.03	0.02	-1.71	-1.56
23	12	8	86	9.463	0.05	0.03	-1.48	-1.33
23	12	10	88	9.471	0.04	0.03	-1.55	-1.41
23	12	12	90	9.479	0.03	0.02	-1.66	-1.51
23	12	14	92	9.491	0.02	0.01	-1.88	-1.73
23	12	16	94	9.475	0.03	0.02	-1.61	-1.46
23	12	18	96	9.477	0.03	0.02	-1.63	-1.48
23	12	20	98	9.484	0.03	0.02	-1.74	-1.59
23	12	22	100	9.482	0.03	0.02	-1.71	-1.56
23	12	24	102	9.482	0.03	0.02	-1.70	-1.55
23	12	26	104	9.499	0.01	0.01	-2.13	-1.98
23	12	28	106	9.486	0.02	0.02	-1.77	-1.62
23	12	30	108	9.486	0.02	0.02	-1.76	-1.61
23	12	32	110	9.488	0.02	0.02	-1.81	-1.66
23	12	34	112	9.497	0.01	0.01	-2.04	-1.89
23	12	36	114	9.499	0.01	0.01	-2.13	-1.98
23	12	38	116	9.502	0.01	0.01	-2.25	-2.10
23	12	40	118	9.497	0.01	0.01	-2.03	-1.88
23	12	42	120	9.494	0.02	0.01	-1.94	-1.79

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-36

DATE: 11/05/90
CASING DIAMETER= 7.04 INCHES
SAND DIAMETER= 10.00 INCHES
OPEN LENGTH= 4.84 Ft
INITIAL WATER ABOVE TRANS.= 9.51 Ft

24-HR CLOCK TIME			WATER			LOG		
HOURS	MINUTES	SECONDS	ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 2.76E-02 CM/SEC FALLING HEAD TEST

K= 3.43E-02 CM/SEC RISING HEAD TEST

OW-37

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE- 11/05/90
 CASING DIAMETER- 4 INCHES
 SAND DIAMETER- 10 INCHES
 OPEN INTERVAL- 13.8 FEET
 INITIAL WATER ABOVE TRANS.- 11.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		FEET	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
23	49	14	0	12.885	1.48	1.00	0.00	0.17
23	49	16	2	12.839	1.44	0.97	-0.01	0.16
23	49	18	4	12.811	1.41	0.95	-0.02	0.15
23	49	20	6	12.731	1.33	0.90	-0.05	0.12
23	49	22	8	12.634	1.23	0.83	-0.08	0.09
23	49	24	10	12.671	1.27	0.86	-0.07	0.10
23	49	26	12	12.650	1.25	0.84	-0.07	0.10
23	49	28	14	12.622	1.22	0.82	-0.08	0.09
23	49	30	16	12.607	1.21	0.81	-0.09	0.08
23	49	32	18	12.600	1.20	0.81	-0.09	0.08
23	49	34	20	12.568	1.17	0.79	-0.10	0.07
23	49	36	22	12.547	1.15	0.77	-0.11	0.06
23	49	38	24	12.531	1.13	0.76	-0.12	0.05
23	49	40	26	12.510	1.11	0.75	-0.13	0.05
23	49	42	28	12.502	1.10	0.74	-0.13	0.04
23	49	44	30	12.486	1.09	0.73	-0.14	0.04
23	49	46	32	12.467	1.07	0.72	-0.14	0.03
23	49	48	34	12.450	1.05	0.71	-0.15	0.02
23	49	50	36	12.435	1.04	0.70	-0.16	0.02
23	49	52	38	12.424	1.02	0.69	-0.16	0.01
23	49	54	40	12.408	1.01	0.68	-0.17	0.00
23	49	56	42	12.390	0.99	0.67	-0.18	-0.00
23	49	58	44	12.389	0.99	0.67	-0.18	-0.00
23	50	0	46	12.371	0.97	0.65	-0.18	-0.01
23	50	2	48	12.359	0.96	0.65	-0.19	-0.02
23	50	4	50	12.345	0.95	0.64	-0.20	-0.02
23	50	6	52	12.339	0.94	0.63	-0.20	-0.03
23	50	8	54	12.321	0.92	0.62	-0.21	-0.04
23	50	10	56	12.305	0.91	0.61	-0.21	-0.04
23	50	12	58	12.293	0.89	0.60	-0.22	-0.05
23	50	14	60	12.288	0.89	0.60	-0.22	-0.05
23	50	16	62	12.268	0.87	0.58	-0.23	-0.06
23	50	18	64	12.262	0.86	0.58	-0.24	-0.06
23	50	20	66	12.248	0.85	0.57	-0.24	-0.07

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90

CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 13.8 FEET
 INITIAL WATER ABOVE TRANS.= 11.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
23	50	22	68	12.235	0.84	0.56	-0.25	-0.08
23	50	24	70	12.234	0.83	0.56	-0.25	-0.08
23	50	26	72	12.220	0.82	0.55	-0.26	-0.09
23	50	28	74	12.205	0.80	0.54	-0.27	-0.09
23	50	30	76	12.195	0.79	0.54	-0.27	-0.10
23	50	40	86	12.149	0.75	0.50	-0.30	-0.13
23	50	45	91	12.128	0.73	0.49	-0.31	-0.14
23	50	50	96	12.108	0.71	0.48	-0.32	-0.15
23	50	55	101	12.089	0.69	0.46	-0.33	-0.16
23	51	0	106	12.056	0.66	0.44	-0.36	-0.18
23	51	5	111	12.033	0.63	0.43	-0.37	-0.20
23	51	10	116	12.027	0.63	0.42	-0.37	-0.20
23	51	15	121	12.006	0.61	0.41	-0.39	-0.22
23	51	20	126	11.991	0.59	0.40	-0.40	-0.23
23	51	25	131	11.985	0.59	0.39	-0.40	-0.23
23	51	30	136	11.947	0.55	0.37	-0.43	-0.26
23	51	35	141	11.931	0.53	0.36	-0.45	-0.27
23	51	40	146	11.920	0.52	0.35	-0.46	-0.28
23	51	45	151	11.911	0.51	0.34	-0.46	-0.29
23	51	50	156	11.902	0.50	0.34	-0.47	-0.30
23	51	55	161	11.881	0.48	0.32	-0.49	-0.32
23	52	0	166	11.868	0.47	0.32	-0.50	-0.33
23	52	5	171	11.866	0.47	0.31	-0.50	-0.33
23	52	10	176	11.853	0.45	0.31	-0.52	-0.34
23	52	15	181	11.835	0.44	0.29	-0.53	-0.36
23	52	20	186	11.819	0.42	0.28	-0.55	-0.38
23	52	25	191	11.821	0.42	0.28	-0.55	-0.38
23	52	30	196	11.803	0.40	0.27	-0.57	-0.39
23	52	35	201	11.799	0.40	0.27	-0.57	-0.40
23	52	40	206	11.783	0.38	0.26	-0.59	-0.42
23	52	45	211	11.765	0.37	0.25	-0.61	-0.44
23	52	50	216	11.756	0.36	0.24	-0.62	-0.45
23	52	55	221	11.755	0.36	0.24	-0.62	-0.45
23	53	0	226	11.749	0.35	0.23	-0.63	-0.46
23	53	5	231	11.731	0.33	0.22	-0.65	-0.48

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 13.8 FEET
 INITIAL WATER ABOVE TRANS.= 11.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
23	53	10	236	11.731	0.33	0.22	-0.65	-0.48
23	53	15	241	11.721	0.32	0.22	-0.67	-0.49
23	53	20	246	11.716	0.32	0.21	-0.67	-0.50
23	53	25	251	11.701	0.30	0.20	-0.69	-0.52
23	53	30	256	11.695	0.29	0.20	-0.70	-0.53
23	53	35	261	11.696	0.30	0.20	-0.70	-0.53
23	53	40	266	11.692	0.29	0.20	-0.71	-0.53
23	53	45	271	11.680	0.28	0.19	-0.72	-0.55
23	53	50	276	11.666	0.27	0.18	-0.75	-0.58
23	53	55	281	11.665	0.27	0.18	-0.75	-0.58
23	54	0	286	11.665	0.26	0.18	-0.75	-0.58
23	54	5	291	11.656	0.26	0.17	-0.76	-0.59
23	54	10	296	11.656	0.26	0.17	-0.76	-0.59
23	54	15	301	11.650	0.25	0.17	-0.77	-0.60
23	54	20	306	11.631	0.23	0.16	-0.81	-0.64
23	54	25	311	11.637	0.24	0.16	-0.80	-0.63
23	54	30	316	11.635	0.24	0.16	-0.80	-0.63
23	54	35	321	11.620	0.22	0.15	-0.83	-0.66
23	54	40	326	11.611	0.21	0.14	-0.85	-0.68
23	54	45	331	11.612	0.21	0.14	-0.84	-0.67
23	55	15	361	11.594	0.19	0.13	-0.88	-0.71
23	55	20	366	11.581	0.18	0.12	-0.91	-0.74
23	55	25	371	11.591	0.19	0.13	-0.89	-0.72
23	55	30	376	11.586	0.19	0.13	-0.90	-0.73
23	55	35	381	11.589	0.19	0.13	-0.90	-0.72
23	55	44	390	11.588	0.19	0.13	-0.90	-0.73

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90

CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 13.8 FEET
 INITIAL WATER ABOVE TRANS.= 11.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
23	55	50	0	9.887	1.51	1.00	0.00	0.18
23	55	52	2	9.956	1.44	0.95	-0.02	0.16
23	55	54	4	9.997	1.40	0.93	-0.03	0.15
23	55	56	6	10.044	1.36	0.90	-0.05	0.13
23	55	58	8	10.066	1.33	0.88	-0.05	0.13
23	56	0	10	10.098	1.30	0.86	-0.07	0.11
23	56	2	12	10.134	1.27	0.84	-0.08	0.10
23	56	4	14	10.140	1.26	0.83	-0.08	0.10
23	56	6	16	10.171	1.23	0.81	-0.09	0.09
23	56	8	18	10.200	1.20	0.79	-0.10	0.08
23	56	10	20	10.213	1.19	0.78	-0.11	0.07
23	56	12	22	10.252	1.15	0.76	-0.12	0.06
23	56	14	24	10.254	1.15	0.76	-0.12	0.06
23	56	16	26	10.294	1.11	0.73	-0.14	0.04
23	56	18	28	10.301	1.10	0.73	-0.14	0.04
23	56	20	30	10.324	1.08	0.71	-0.15	0.03
23	56	22	32	10.349	1.05	0.69	-0.16	0.02
23	56	24	34	10.373	1.03	0.68	-0.17	0.01
23	56	26	36	10.389	1.01	0.67	-0.18	0.00
23	56	28	38	10.397	1.00	0.66	-0.18	0.00
23	56	30	40	10.426	0.97	0.64	-0.19	-0.01
23	56	32	42	10.446	0.95	0.63	-0.20	-0.02
23	56	34	44	10.446	0.95	0.63	-0.20	-0.02
23	56	36	46	10.460	0.94	0.62	-0.21	-0.03
23	56	38	48	10.488	0.91	0.60	-0.22	-0.04
23	56	40	50	10.503	0.90	0.59	-0.23	-0.05
23	56	42	52	10.517	0.88	0.58	-0.23	-0.05
23	56	44	54	10.529	0.87	0.58	-0.24	-0.06
23	56	46	56	10.554	0.85	0.56	-0.25	-0.07
23	56	48	58	10.566	0.83	0.55	-0.26	-0.08
23	56	50	60	10.584	0.82	0.54	-0.27	-0.09
23	56	52	62	10.587	0.81	0.54	-0.27	-0.09
23	56	54	64	10.613	0.79	0.52	-0.28	-0.10
23	56	56	66	10.627	0.77	0.51	-0.29	-0.11

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 13.8 FEET
 INITIAL WATER ABOVE TRANS.= 11.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
23	56	58	68	10.638	0.76	0.50	-0.30	-0.12
23	57	0	70	10.658	0.74	0.49	-0.31	-0.13
23	57	2	72	10.649	0.75	0.50	-0.30	-0.12
23	57	4	74	10.683	0.72	0.47	-0.32	-0.14
23	57	6	76	10.704	0.70	0.46	-0.34	-0.16
23	57	8	78	10.698	0.70	0.46	-0.33	-0.15
23	57	10	80	10.724	0.68	0.45	-0.35	-0.17
23	57	12	82	10.720	0.68	0.45	-0.35	-0.17
23	57	14	84	10.743	0.66	0.43	-0.36	-0.18
23	57	16	86	10.750	0.65	0.43	-0.37	-0.19
23	57	18	88	10.759	0.64	0.42	-0.37	-0.19
23	57	20	90	10.771	0.63	0.42	-0.38	-0.20
23	57	22	92	10.793	0.61	0.40	-0.40	-0.22
23	57	24	94	10.805	0.60	0.39	-0.41	-0.23
23	57	26	96	10.808	0.59	0.39	-0.41	-0.23
23	57	30	100	10.840	0.56	0.37	-0.43	-0.25
23	57	32	102	10.842	0.56	0.37	-0.43	-0.25
23	57	34	104	10.859	0.54	0.36	-0.45	-0.27
23	57	36	106	10.858	0.54	0.36	-0.45	-0.27
23	57	38	108	10.878	0.52	0.35	-0.46	-0.28
23	57	40	110	10.883	0.52	0.34	-0.47	-0.29
23	57	42	112	10.887	0.51	0.34	-0.47	-0.29
23	57	44	114	10.901	0.50	0.33	-0.48	-0.30
23	57	46	116	10.922	0.48	0.32	-0.50	-0.32
23	57	48	118	10.926	0.47	0.31	-0.50	-0.32
23	57	50	120	10.935	0.47	0.31	-0.51	-0.33
23	57	52	122	10.936	0.46	0.31	-0.51	-0.33
23	57	54	124	10.955	0.45	0.29	-0.53	-0.35
23	57	56	126	10.947	0.45	0.30	-0.52	-0.34
23	57	58	128	10.959	0.44	0.29	-0.54	-0.36
23	58	0	130	10.966	0.43	0.29	-0.54	-0.36
23	58	2	132	10.980	0.42	0.28	-0.56	-0.38
23	58	4	134	10.983	0.42	0.28	-0.56	-0.38
23	58	6	136	10.996	0.40	0.27	-0.57	-0.39
23	58	8	138	10.999	0.40	0.26	-0.58	-0.40

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 13.8 FEET
 INITIAL WATER ABOVE TRANS.= 11.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG		
HOURS	MINUTES	SECONDS		TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD	
23	58	10	140	11.011	0.39	0.26	-0.59	-0.41	
23	58	12	142	11.022	0.38	0.25	-0.60	-0.42	
23	58	14	144	11.024	0.38	0.25	-0.61	-0.43	
23	58	16	146	11.039	0.36	0.24	-0.62	-0.44	
23	58	18	148	11.035	0.37	0.24	-0.62	-0.44	
23	58	20	150	11.050	0.35	0.23	-0.64	-0.46	
23	58	22	152	11.053	0.35	0.23	-0.64	-0.46	
23	58	24	154	11.061	0.34	0.22	-0.65	-0.47	
23	58	26	156	11.066	0.33	0.22	-0.66	-0.48	
23	58	28	158	11.080	0.32	0.21	-0.68	-0.50	
23	58	30	160	11.083	0.32	0.21	-0.68	-0.50	
23	58	32	162	11.087	0.31	0.21	-0.68	-0.50	
23	58	34	164	11.091	0.31	0.20	-0.69	-0.51	
23	58	36	166	11.098	0.30	0.20	-0.70	-0.52	
23	58	38	168	11.106	0.29	0.19	-0.71	-0.53	
23	58	45	175	11.122	0.28	0.18	-0.74	-0.56	
23	58	50	180	11.136	0.26	0.17	-0.76	-0.58	
23	58	55	185	11.155	0.25	0.16	-0.79	-0.61	
23	59	0	190	11.165	0.24	0.16	-0.81	-0.63	
23	59	5	195	11.178	0.22	0.15	-0.83	-0.65	
23	59	10	200	11.181	0.22	0.14	-0.84	-0.66	
23	59	15	205	11.193	0.21	0.14	-0.86	-0.68	
23	59	20	210	11.207	0.19	0.13	-0.89	-0.71	
23	59	25	215	11.221	0.18	0.12	-0.93	-0.75	
23	59	30	220	11.230	0.17	0.11	-0.95	-0.77	
23	59	35	225	11.235	0.16	0.11	-0.96	-0.78	
23	59	40	230	11.245	0.16	0.10	-0.99	-0.81	
23	59	45	235	11.257	0.14	0.09	-1.02	-0.84	
23	59	50	240	11.265	0.13	0.09	-1.05	-0.87	
23	59	55	245	11.272	0.13	0.08	-1.07	-0.89	
24	0	0	250	11.282	0.12	0.08	-1.11	-0.93	
24	0	5	255	11.289	0.11	0.07	-1.14	-0.96	
24	0	10	260	11.301	0.10	0.07	-1.19	-1.01	
24	0	15	265	11.299	0.10	0.07	-1.17	-0.99	
24	0	20	270	11.306	0.09	0.06	-1.21	-1.03	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 13.8 FEET
 INITIAL WATER ABOVE TRANS.= 11.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
24	0	25	275	11.309	0.09	0.06	-1.22	-1.04
24	0	30	280	11.324	0.08	0.05	-1.30	-1.12
24	0	35	285	11.327	0.07	0.05	-1.32	-1.14
24	0	40	290	11.334	0.07	0.04	-1.36	-1.18
24	0	45	295	11.342	0.06	0.04	-1.42	-1.24
24	0	50	300	11.341	0.06	0.04	-1.41	-1.23
24	0	55	305	11.348	0.05	0.03	-1.46	-1.28
24	1	0	310	11.356	0.04	0.03	-1.53	-1.35
24	1	5	315	11.359	0.04	0.03	-1.57	-1.39
24	1	10	320	11.357	0.04	0.03	-1.55	-1.37
24	1	15	325	11.370	0.03	0.02	-1.70	-1.52
24	1	20	330	11.378	0.02	0.01	-1.83	-1.65
24	1	25	335	11.368	0.03	0.02	-1.67	-1.49
24	1	30	340	11.373	0.03	0.02	-1.75	-1.57
24	1	35	345	11.382	0.02	0.01	-1.93	-1.75
24	1	40	350	11.387	0.01	0.01	-2.07	-1.89
24	1	45	355	11.390	0.01	0.01	-2.19	-2.01
24	1	50	360	11.400	0.00	0.00	-4.20	-4.02
24	1	55	365	11.396	0.00	0.00	-2.63	-2.45

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90
CASING DIAMETER= 4 INCHES
SAND DIAMETER= 10 INCHES
OPEN INTERVAL= 13.8 FEET
INITIAL WATER ABOVE TRANS.= 11.4 FEET

24-HR CLOCK TIME	ELAPSED TIME HOURS	(SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
			(FEET)	(FEET)	HEAD RATIO			

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 8.24E-04 CM/SEC FALLING HEAD*

K= 1.02E-03 CM/SEC RISING HEAD**

OW-38

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

DATE= 11/05/90
 CASING DIAMETER= 8.2 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 11.29 FEET
 INITIAL WATER ABOVE TRANS.= 8.48 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS							
FALLING HEAD TEST									
18	39	40	0	9.853	1.37	1.00	0.00	0.14	
18	39	42	2	9.777	1.30	0.94	-0.02	0.11	
18	39	44	4	9.712	1.23	0.90	-0.05	0.09	
18	39	46	6	9.645	1.16	0.85	-0.07	0.07	
18	39	48	8	9.615	1.14	0.83	-0.08	0.06	
18	39	50	10	9.548	1.07	0.78	-0.11	0.03	
18	39	52	12	9.512	1.03	0.75	-0.12	0.01	
18	39	54	14	9.473	0.99	0.72	-0.14	-0.00	
18	39	56	16	9.438	0.96	0.70	-0.16	-0.02	
18	39	58	18	9.401	0.92	0.67	-0.17	-0.04	
18	40	0	20	9.371	0.89	0.65	-0.19	-0.05	
18	40	2	22	9.338	0.86	0.62	-0.20	-0.07	
18	40	4	24	9.309	0.83	0.60	-0.22	-0.08	
18	40	6	26	9.282	0.80	0.58	-0.23	-0.10	
18	40	8	28	9.255	0.77	0.56	-0.25	-0.11	
18	40	10	30	9.232	0.75	0.55	-0.26	-0.12	
18	40	12	32	9.206	0.73	0.53	-0.28	-0.14	
18	40	14	34	9.165	0.68	0.50	-0.30	-0.16	
18	40	16	36	9.152	0.67	0.49	-0.31	-0.17	
18	40	18	38	9.129	0.65	0.47	-0.33	-0.19	
18	40	20	40	9.107	0.63	0.46	-0.34	-0.20	
18	40	22	42	9.084	0.60	0.44	-0.36	-0.22	
18	40	24	44	9.066	0.59	0.43	-0.37	-0.23	
18	40	26	46	9.055	0.57	0.42	-0.38	-0.24	
18	40	28	48	9.032	0.55	0.40	-0.40	-0.26	
18	40	30	50	9.013	0.53	0.39	-0.41	-0.27	
18	40	32	52	8.994	0.51	0.37	-0.43	-0.29	
18	40	34	54	8.986	0.51	0.37	-0.43	-0.30	
18	40	36	56	8.969	0.49	0.36	-0.45	-0.31	
18	40	38	58	8.954	0.47	0.34	-0.46	-0.32	
18	40	40	60	8.938	0.46	0.33	-0.48	-0.34	
18	40	42	62	8.932	0.45	0.33	-0.48	-0.35	
18	40	44	64	8.919	0.44	0.32	-0.50	-0.36	
18	40	46	66	8.906	0.43	0.31	-0.51	-0.37	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

DATE= 11/05/90
 CASING DIAMETER= 8.2 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 11.29 FEET
 INITIAL WATER ABOVE TRANS.= 8.48 FEET

24-HR CLOCK TIME	HOURS	MINUTES	SECONDS	ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
						(FEET)	HEAD (FEET)		
18	40	48		68	8.895	0.41	0.30	-0.52	-0.38
18	40	50		70	8.883	0.40	0.29	-0.53	-0.40
18	40	52		72	8.873	0.39	0.29	-0.54	-0.41
18	40	54		74	8.865	0.38	0.28	-0.55	-0.42
18	40	56		76	8.857	0.38	0.27	-0.56	-0.42
18	40	58		78	8.855	0.38	0.27	-0.56	-0.43
18	41	0		80	8.840	0.36	0.26	-0.58	-0.44
18	41	2		82	8.827	0.35	0.25	-0.60	-0.46
18	41	4		84	8.827	0.35	0.25	-0.60	-0.46
18	41	6		86	8.825	0.34	0.25	-0.60	-0.46
18	41	8		88	8.808	0.33	0.24	-0.62	-0.48
18	41	10		90	8.805	0.32	0.24	-0.63	-0.49
18	41	12		92	8.800	0.32	0.23	-0.63	-0.50
18	41	14		94	8.793	0.31	0.23	-0.64	-0.50
18	41	16		96	8.783	0.30	0.22	-0.66	-0.52
18	41	18		98	8.787	0.31	0.22	-0.65	-0.51
18	41	20		100	8.776	0.30	0.22	-0.67	-0.53
18	41	22		102	8.775	0.30	0.21	-0.67	-0.53
18	41	24		104	8.769	0.29	0.21	-0.68	-0.54
18	41	26		106	8.759	0.28	0.20	-0.69	-0.55
18	41	28		108	8.762	0.28	0.21	-0.69	-0.55
18	41	30		110	8.752	0.27	0.20	-0.70	-0.57
18	41	45		125	8.716	0.24	0.17	-0.76	-0.63
18	41	50		130	8.705	0.23	0.16	-0.78	-0.65
18	41	55		135	8.694	0.21	0.16	-0.81	-0.67
18	42	0		140	8.696	0.22	0.16	-0.80	-0.67
18	42	5		145	8.685	0.21	0.15	-0.83	-0.69
18	42	10		150	8.679	0.20	0.15	-0.84	-0.70
18	42	15		155	8.662	0.18	0.13	-0.88	-0.74
18	42	20		160	8.654	0.17	0.13	-0.90	-0.76
18	42	25		165	8.655	0.18	0.13	-0.89	-0.76
18	42	30		170	8.645	0.16	0.12	-0.92	-0.78
18	42	35		175	8.634	0.15	0.11	-0.95	-0.81
18	42	40		180	8.638	0.16	0.12	-0.94	-0.80
18	42	45		185	8.630	0.15	0.11	-0.96	-0.83

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

DATE= 11/05/90
 CASING DIAMETER= 8.2 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 11.29 FEET
 INITIAL WATER ABOVE TRANS.= 8.48 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
18	42	50	190	8.614	0.13	0.10	-1.01	-0.87
18	42	55	195	8.619	0.14	0.10	-1.00	-0.86
18	43	0	200	8.607	0.13	0.09	-1.03	-0.90
18	43	5	205	8.600	0.12	0.09	-1.06	-0.92
18	43	10	210	8.597	0.12	0.08	-1.07	-0.93
18	43	15	215	8.588	0.11	0.08	-1.11	-0.97
18	43	20	220	8.595	0.11	0.08	-1.08	-0.94
18	43	25	225	8.585	0.11	0.08	-1.12	-0.98
18	43	30	230	8.581	0.10	0.07	-1.13	-1.00
18	43	35	235	8.572	0.09	0.07	-1.18	-1.04
18	43	40	240	8.574	0.09	0.07	-1.17	-1.03
18	43	45	245	8.570	0.09	0.07	-1.18	-1.04
18	43	50	250	8.564	0.08	0.06	-1.21	-1.08
18	43	55	255	8.566	0.09	0.06	-1.20	-1.07
18	44	0	260	8.571	0.09	0.07	-1.18	-1.04
18	44	5	265	8.567	0.09	0.06	-1.20	-1.06
18	44	10	270	8.559	0.08	0.06	-1.24	-1.10
18	44	15	275	8.564	0.08	0.06	-1.21	-1.08
18	44	20	280	8.561	0.08	0.06	-1.23	-1.09
18	44	25	285	8.558	0.08	0.06	-1.24	-1.11
18	44	30	290	8.556	0.08	0.05	-1.26	-1.12
18	44	35	295	8.555	0.07	0.05	-1.27	-1.13
18	44	40	300	8.552	0.07	0.05	-1.28	-1.14
18	44	45	305	8.550	0.07	0.05	-1.29	-1.15
18	44	50	310	8.548	0.07	0.05	-1.30	-1.17
18	44	58	318	8.547	0.07	0.05	-1.31	-1.18
18	45	0	320	8.545	0.06	0.05	-1.33	-1.19
18	45	8	328	8.539	0.06	0.04	-1.37	-1.23
18	45	10	330	8.542	0.06	0.05	-1.34	-1.21
18	45	12	332	8.548	0.07	0.05	-1.30	-1.17
18	45	14	334	8.538	0.06	0.04	-1.37	-1.23
18	45	16	336	8.543	0.06	0.05	-1.34	-1.20
18	45	18	338	8.550	0.07	0.05	-1.30	-1.16
18	45	20	340	8.547	0.07	0.05	-1.31	-1.17
18	45	22	342	8.547	0.07	0.05	-1.31	-1.17

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

DATE= 11/05/90
 CASING DIAMETER= 8.2 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 11.29 FEET
 INITIAL WATER ABOVE TRANS.= 8.48 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO				
RISING HEAD TEST									
18	45	26	0	7.006	1.47	1.00	**	0.00	0.17
18	45	28	2	7.127	1.35	0.92	-0.04	0.13	
18	45	30	4	7.208	1.27	0.86	-0.06	0.10	
18	45	32	6	7.283	1.20	0.81	-0.09	0.08	
18	45	34	8	7.357	1.12	0.76	-0.12	0.05	
18	45	36	10	7.412	1.07	0.72	-0.14	0.03	
18	45	38	12	7.463	1.02	0.69	-0.16	0.01	
18	45	40	14	7.514	0.97	0.66	-0.18	-0.02	
18	45	42	16	7.558	0.92	0.63	-0.20	-0.04	
18	45	44	18	7.599	0.88	0.60	-0.22	-0.06	
18	45	46	20	7.639	0.84	0.57	-0.24	-0.08	
18	45	48	22	7.677	0.80	0.54	-0.26	-0.10	
18	45	50	24	7.712	0.77	0.52	-0.28	-0.11	
18	45	52	26	7.745	0.74	0.50	-0.30	-0.13	
18	45	54	28	7.771	0.71	0.48	-0.32	-0.15	
18	45	56	30	7.808	0.67	0.46	-0.34	-0.17	
18	45	58	32	7.835	0.64	0.44	-0.36	-0.19	
18	46	0	34	7.868	0.61	0.41	-0.38	-0.21	
18	46	2	36	7.882	0.60	0.41	-0.39	-0.22	
18	46	4	38	7.918	0.56	0.38	-0.42	-0.25	
18	46	6	40	7.940	0.54	0.37	**	-0.44	-0.27
18	46	8	42	7.961	0.52	0.35	-0.45	-0.28	
18	46	10	44	7.983	0.50	0.34	-0.47	-0.30	
18	46	12	46	8.005	0.48	0.32	-0.49	-0.32	
18	46	14	48	8.017	0.46	0.31	-0.50	-0.33	
18	46	16	50	8.040	0.44	0.30	-0.52	-0.36	
18	46	18	52	8.050	0.43	0.29	-0.53	-0.37	
18	46	20	54	8.073	0.41	0.28	-0.56	-0.39	
18	46	22	56	8.088	0.39	0.27	-0.58	-0.41	
18	46	24	58	8.103	0.38	0.26	-0.59	-0.42	
18	46	26	60	8.123	0.36	0.24	-0.62	-0.45	
18	46	28	62	8.129	0.35	0.24	-0.62	-0.45	
18	46	30	64	8.149	0.33	0.22	-0.65	-0.48	
18	46	32	66	8.159	0.32	0.22	-0.66	-0.49	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

DATE= 11/05/90
 CASING DIAMETER= 8.2 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 11.29 FEET
 INITIAL WATER ABOVE TRANS.= 8.48 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO	LOG HEAD		
18	46	34	68	8.168	0.31	0.21	-0.67	-0.51
18	46	36	70	8.189	0.29	0.20	-0.70	-0.54
18	46	38	72	8.193	0.29	0.19	-0.71	-0.54
18	46	40	74	8.207	0.27	0.19	-0.73	-0.56
18	46	42	76	8.216	0.26	0.18	-0.75	-0.58
18	46	44	78	8.221	0.26	0.18	-0.76	-0.59
18	46	46	80	8.230	0.25	0.17	-0.77	-0.60
18	46	48	82	8.240	0.24	0.16	-0.79	-0.62
18	46	50	84	8.247	0.23	0.16	-0.80	-0.63
18	46	52	86	8.247	0.23	0.16	-0.80	-0.63
18	46	54	88	8.258	0.22	0.15	-0.82	-0.65
18	46	56	90	8.275	0.21	0.14	-0.86	-0.69
18	46	58	92	8.283	0.20	0.13	-0.87	-0.71
18	47	5	99	8.296	0.18	0.13	-0.90	-0.73
18	47	10	104	8.320	0.16	0.11	-0.96	-0.80
18	47	15	109	8.331	0.15	0.10	-0.99	-0.83
18	47	20	114	8.336	0.14	0.10	-1.01	-0.84
18	47	25	119	8.356	0.12	0.08	-1.07	-0.91
18	47	30	124	8.365	0.11	0.08	-1.11	-0.94
18	47	35	129	8.379	0.10	0.07	-1.16	-0.99
18	47	40	134	8.380	0.10	0.07	-1.17	-1.00
18	47	45	139	8.381	0.10	0.07	-1.17	-1.01
18	47	50	144	8.387	0.09	0.06	-1.20	-1.03
18	47	55	149	8.403	0.08	0.05	-1.28	-1.11
18	48	0	154	8.399	0.08	0.05	-1.26	-1.09
18	48	5	159	8.414	0.07	0.04	-1.35	-1.18
18	48	10	164	8.416	0.06	0.04	-1.36	-1.20
18	48	15	169	8.412	0.07	0.05	-1.34	-1.17
18	48	20	174	8.424	0.06	0.04	-1.42	-1.26
18	48	25	179	8.428	0.05	0.04	-1.46	-1.29
18	48	30	184	8.429	0.05	0.03	-1.46	-1.29
18	48	35	189	8.430	0.05	0.03	-1.47	-1.30
18	48	40	194	8.438	0.04	0.03	-1.55	-1.38
18	48	45	199	8.444	0.04	0.02	-1.62	-1.45
18	48	50	204	8.452	0.03	0.02	-1.72	-1.55

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

DATE- 11/05/90

CASING	DIAMETER=	8.2 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	11.29 FEET
INITIAL WATER ABOVE TRANS.=		8.48 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
18	48	55	209	8.449	0.03	0.02	-1.67	-1.50
18	49	0	214	8.453	0.03	0.02	-1.73	-1.56
18	49	5	219	8.454	0.03	0.02	-1.75	-1.58
18	49	10	224	8.469	0.01	0.01	-2.13	-1.96
18	49	15	229	8.445	0.04	0.02	-1.62	-1.45
18	49	20	234	8.451	0.03	0.02	-1.70	-1.53
18	49	25	239	8.451	0.03	0.02	-1.71	-1.54
18	49	30	244	8.456	0.02	0.02	-1.78	-1.61
18	49	35	249	8.463	0.02	0.01	-1.95	-1.78
18	49	40	254	8.468	0.01	0.01	-2.10	-1.93
18	49	45	259	8.466	0.01	0.01	-2.03	-1.86
18	49	50	264	8.468	0.01	0.01	-2.08	-1.91
18	49	55	269	8.476	0.00	0.00	-2.58	-2.41
18	50	0	274	8.473	0.01	0.00	-2.30	-2.13
18	50	5	279	8.475	0.00	0.00	-2.49	-2.32
18	50	10	284	8.474	0.01	0.00	-2.41	-2.24
18	50	15	289	8.479	0.00	0.00	-3.13	-2.96

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

DATE= 11/05/90
CASING DIAMETER= 8.2 INCHES
SAND DIAMETER= 12 INCHES
OPEN INTERVAL= 11.29 FEET
INITIAL WATER ABOVE TRANS.= 8.48 FEET

24-HR CLOCK TIME HOURS	MINUTES	SECONDS	WATER				LOG HEAD RATIO	LOG HEAD
			ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
-----	-----	-----	-----	-----	-----	-----	-----	

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 4.21E-03 CM/SEC FALLING HEAD*

K= 1.23E-02 CM/SEC RISING HEAD**

OW-39

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.89 FEET
 INITIAL WATER ABOVE TRANS.= 7.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
15	10	34	0	8.360	1.16	1.00	0.00	0.06
15	10	36	2	8.334	1.13	0.98	-0.01	0.05
15	10	38	4	8.310	1.11	0.96	-0.02	0.05
15	10	40	6	8.284	1.08	0.93	-0.03	0.04
15	10	42	8	8.253	1.05	0.91	-0.04	0.02
15	10	44	10	8.203	1.00	0.86	-0.06	0.00
15	10	46	12	8.163	0.96	0.83	-0.08	-0.02
15	10	48	14	8.193	0.99	0.86	-0.07	-0.00
15	10	50	16	8.162	0.96	0.83	-0.08	-0.02
15	10	52	18	8.142	0.94	0.81	-0.09	-0.03
15	10	54	20	8.127	0.93	0.80	-0.10	-0.03
15	10	56	22	8.118	0.92	0.79	-0.10	-0.04
15	10	58	24	8.080	0.88	0.76	-0.12	-0.06
15	11	0	26	8.086	0.89	0.76	-0.12	-0.05
15	11	2	28	8.071	0.87	0.75	-0.12	-0.06
15	11	4	30	8.062	0.86	0.74	-0.13	-0.06
15	11	6	32	8.011	0.81	0.70	-0.16	-0.09
15	11	8	34	8.044	0.84	0.73	-0.14	-0.07
15	11	10	36	8.029	0.83	0.71	-0.15	-0.08
15	11	12	38	8.018	0.82	0.71	-0.15	-0.09
15	11	14	40	8.022	0.82	0.71	-0.15	-0.09
15	11	16	42	8.011	0.81	0.70	-0.16	-0.09
15	11	18	44	8.011	0.81	0.70	-0.16	-0.09
15	11	20	46	7.990	0.79	0.68	-0.17	-0.10
15	11	22	48	7.951	0.75	0.65	-0.19	-0.12
15	11	24	50	7.990	0.79	0.68	-0.17	-0.10
15	11	26	52	7.980	0.78	0.67	-0.17	-0.11
15	11	28	54	7.969	0.77	0.66	-0.18	-0.11
15	11	30	56	7.972	0.77	0.67	-0.18	-0.11
15	11	32	58	7.963	0.76	0.66	-0.18	-0.12
15	11	34	60	7.959	0.76	0.65	-0.18	-0.12
15	11	36	62	7.964	0.76	0.66	-0.18	-0.12
15	11	38	64	7.948	0.75	0.64	-0.19	-0.13
15	11	40	66	7.945	0.75	0.64	-0.19	-0.13

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.89 FEET
 INITIAL WATER ABOVE TRANS.= 7.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO	LOG HEAD		
15	11	42	68	7.940	0.74	0.64	-0.20	-0.13
15	11	44	70	7.943	0.74	0.64	-0.19	-0.13
15	11	46	72	7.940	0.74	0.64	-0.19	-0.13
15	11	48	74	7.924	0.72	0.62	-0.20	-0.14
15	11	50	76	7.909	0.71	0.61	-0.21	-0.15
15	11	52	78	7.928	0.73	0.63	-0.20	-0.14
15	11	54	80	7.911	0.71	0.61	-0.21	-0.15
15	11	56	82	7.902	0.70	0.61	-0.22	-0.15
15	11	58	84	7.896	0.70	0.60	-0.22	-0.16
15	12	0	86	7.897	0.70	0.60	-0.22	-0.16
15	12	2	88	7.904	0.70	0.61	-0.22	-0.15
15	12	4	90	7.890	0.69	0.60	-0.23	-0.16
15	12	6	92	7.903	0.70	0.61	-0.22	-0.15
15	12	8	94	7.890	0.69	0.59	-0.23	-0.16
15	12	10	96	7.874	0.67	0.58	-0.24	-0.17
15	12	12	98	7.873	0.67	0.58	-0.24	-0.17
15	12	14	100	7.871	0.67	0.58	-0.24	-0.17
15	12	16	102	7.862	0.66	0.57	-0.24	-0.18
15	12	18	104	7.850	0.65	0.56	-0.25	-0.19
15	12	20	106	7.847	0.65	0.56	-0.25	-0.19
15	12	22	108	7.852	0.65	0.56	-0.25	-0.19
15	12	24	110	7.852	0.65	0.56	-0.25	-0.19
15	12	26	112	7.840	0.64	0.55	-0.26	-0.19
15	12	45	131	7.796	0.60	0.51	-0.29	-0.22
15	13	0	146	7.762	0.56	0.48	-0.31	-0.25
15	13	15	161	7.736	0.54	0.46	-0.34	-0.27
15	13	30	176	7.705	0.51	0.44	-0.36	-0.30
15	13	45	191	7.679	0.48	0.41	-0.38	-0.32
15	14	0	206	7.690	0.49	0.42	-0.37	-0.31
15	14	15	221	7.631	0.43	0.37	-0.43	-0.37
15	14	30	236	7.645	0.45	0.38	-0.42	-0.35
15	14	45	251	7.591	0.39	0.34	-0.47	-0.41
15	16	0	326	7.499	0.30	0.26	-0.59	-0.52
15	17	0	386	7.479	0.28	0.24	-0.62	-0.55
15	18	0	446	7.406	0.21	0.18	-0.75	-0.69

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.89 FEET
 INITIAL WATER ABOVE TRANS.= 7.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD (FEET)	HEAD RATIO		
15	19	0	506	7.380	0.18	0.16	-0.81	-0.74
15	20	0	566	7.378	0.18	0.15	-0.81	-0.75
15	21	0	626	7.354	0.15	0.13	-0.88	-0.81
15	22	0	686	7.267	0.07	0.06	-1.24	-1.17
15	22	30	716	7.271	0.07	0.06	-1.21	-1.15
15	22	32	718	7.270	0.07	0.06	-1.22	-1.16
15	22	40	726	7.296	0.10	0.08	-1.08	-1.02
15	22	42	728	7.297	0.10	0.08	-1.08	-1.01
15	22	44	730	7.276	0.08	0.07	-1.18	-1.12

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.89 FEET
 INITIAL WATER ABOVE TRANS.= 7.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
15	22	46	0	5.775	1.43	1.00	0.00	0.15
15	22	48	2	5.825	1.38	0.96	-0.02	0.14
15	22	50	4	5.863	1.34	0.94	-0.03	0.13
15	22	52	6	5.887	1.31	0.92	-0.04	0.12
15	22	54	8	5.922	1.28	0.90 **	-0.05	0.11
15	22	56	10	5.940	1.26	0.88	-0.05	0.10
15	22	58	12	5.969	1.23	0.86	-0.06	0.09
15	23	0	14	5.974	1.23	0.86	-0.07	0.09
15	23	2	16	5.995	1.20	0.85	-0.07	0.08
15	23	4	18	6.015	1.19	0.83	-0.08	0.07
15	23	6	20	6.025	1.17	0.82	-0.08	0.07
15	23	8	22	6.038	1.16	0.82	-0.09	0.07
15	23	10	24	6.049	1.15	0.81	-0.09	0.06
15	23	12	26	6.074	1.13	0.79	-0.10	0.05
15	23	14	28	6.088	1.11	0.78	-0.11	0.05
15	23	16	30	6.089	1.11	0.78	-0.11	0.05
15	23	18	32	6.102	1.10	0.77	-0.11	0.04
15	23	20	34	6.130	1.07	0.75	-0.12	0.03
15	23	22	36	6.133	1.07	0.75	-0.13	0.03
15	23	24	38	6.143	1.06	0.74	-0.13	0.02
15	23	26	40	6.167	1.03	0.72	-0.14	0.01
15	23	28	42	6.170	1.03	0.72	-0.14	0.01
15	23	30	44	6.180	1.02	0.72	-0.15	0.01
15	23	32	46	6.196	1.00	0.70	-0.15	0.00
15	23	34	48	6.205	1.00	0.70	-0.16	-0.00
15	23	36	50	6.219	0.98	0.69	-0.16	-0.01
15	23	38	52	6.229	0.97	0.68	-0.17	-0.01
15	23	40	54	6.245	0.96	0.67	-0.17	-0.02
15	23	42	56	6.255	0.94	0.66	-0.18	-0.02
15	23	44	58	6.268	0.93	0.65 **	-0.18	-0.03
15	23	46	60	6.274	0.93	0.65	-0.19	-0.03
15	23	48	62	6.294	0.91	0.64	-0.20	-0.04
15	23	50	64	6.296	0.90	0.63	-0.20	-0.04
15	23	52	66	6.303	0.90	0.63	-0.20	-0.05

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.89 FEET
 INITIAL WATER ABOVE TRANS.= 7.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
15	23	54	68	6.321	0.88	0.62	-0.21	-0.06
15	23	56	70	6.327	0.87	0.61	-0.21	-0.06
15	23	58	72	6.333	0.87	0.61	-0.22	-0.06
15	24	0	74	6.349	0.85	0.60	-0.22	-0.07
15	24	2	76	6.353	0.85	0.59	-0.23	-0.07
15	24	4	78	6.368	0.83	0.58	-0.23	-0.08
15	24	6	80	6.367	0.83	0.58	-0.23	-0.08
15	24	8	82	6.386	0.81	0.57	-0.24	-0.09
15	24	10	84	6.385	0.82	0.57	-0.24	-0.09
15	24	12	86	6.402	0.80	0.56	-0.25	-0.10
15	24	14	88	6.406	0.79	0.56	-0.25	-0.10
15	24	16	90	6.422	0.78	0.55	-0.26	-0.11
15	24	18	92	6.426	0.77	0.54	-0.27	-0.11
15	24	20	94	6.434	0.77	0.54	-0.27	-0.12
15	24	22	96	6.444	0.76	0.53	-0.28	-0.12
15	24	24	98	6.451	0.75	0.53	-0.28	-0.13
15	24	26	100	6.454	0.75	0.52	-0.28	-0.13
15	24	28	102	6.467	0.73	0.51	-0.29	-0.14
15	24	30	104	6.474	0.73	0.51	-0.29	-0.14
15	24	32	106	6.480	0.72	0.51	-0.30	-0.14
15	24	34	108	6.485	0.71	0.50	-0.30	-0.15
15	24	36	110	6.490	0.71	0.50	-0.30	-0.15
15	24	38	112	6.501	0.70	0.49	-0.31	-0.16
15	24	40	114	6.507	0.69	0.49	-0.31	-0.16
15	24	42	116	6.513	0.69	0.48	-0.32	-0.16
15	24	44	118	6.518	0.68	0.48	-0.32	-0.17
15	24	46	120	6.517	0.68	0.48	-0.32	-0.17
15	24	48	122	6.528	0.67	0.47	-0.33	-0.17
15	24	50	124	6.531	0.67	0.47	-0.33	-0.17
15	24	52	126	6.537	0.66	0.46	-0.33	-0.18
15	24	54	128	6.544	0.66	0.46	-0.34	-0.18
15	24	56	130	6.554	0.65	0.45	-0.34	-0.19
15	24	58	132	6.555	0.64	0.45	-0.34	-0.19
15	25	0	134	6.562	0.64	0.45	-0.35	-0.20
15	25	15	149	6.594	0.61	0.42	-0.37	-0.22

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

DATE= 11/07/90

CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.89 FEET
 INITIAL WATER ABOVE TRANS.= 7.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
15	25	30	164	6.627	0.57	0.40	-0.40	-0.24	
15	25	45	179	6.658	0.54	0.38	-0.42	-0.27	
15	26	0	194	6.683	0.52	0.36	-0.44	-0.29	
15	26	15	209	6.706	0.49	0.35	-0.46	-0.31	
15	26	30	224	6.728	0.47	0.33	-0.48	-0.33	
15	26	45	239	6.748	0.45	0.32	-0.50	-0.35	
15	27	0	254	6.774	0.43	0.30	-0.52	-0.37	
15	27	15	269	6.792	0.41	0.29	-0.54	-0.39	
15	27	30	284	6.806	0.39	0.28	-0.56	-0.40	
15	27	45	299	6.828	0.37	0.26	-0.58	-0.43	
15	28	0	314	6.841	0.36	0.25	-0.60	-0.45	
15	28	15	329	6.850	0.35	0.25	-0.61	-0.46	
15	28	30	344	6.864	0.34	0.24	-0.63	-0.47	
15	28	45	359	6.875	0.32	0.23	-0.64	-0.49	
15	29	0	374	6.886	0.31	0.22	-0.66	-0.50	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

DATE= 11/07/90
CASING DIAMETER= 7.04 INCHES
SAND DIAMETER= 10 INCHES
OPEN INTERVAL= 7.89 FEET
INITIAL WATER ABOVE TRANS.= 7.2 FEET

24-HR CLOCK TIME HOURS MINUTES SECONDS	ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
		HEAD (FEET)	HEAD (FEET)	HEAD RATIO		
-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.62E-03 CM/SEC FALLING HEAD*

K= 3.09E-03 CM/SEC RISING HEAD**

OW-40

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90

CASING	DIAMETER=	8.2 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	4.82 FEET
INITIAL WATER ABOVE TRANS.=		7.64 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD RATIO	LOG HEAD RATIO	
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)		LOG HEAD	

FALLING HEAD TEST

12	1	32	0	8.924	1.28	1.00	0.00	0.11
12	1	34	2	8.233	0.59	0.46	-0.34	-0.23
12	1	36	4	8.077	0.44	0.34	-0.47	-0.36
12	1	38	6	8.015	0.38	0.29	-0.53	-0.43
12	1	40	8	7.950	0.31	0.24	-0.62	-0.51
12	1	42	10	7.889	0.25	0.19	-0.71	-0.60
12	1	44	12	7.859	0.22	0.17	-0.77	-0.66
12	1	46	14	7.865	0.22	0.17	-0.76	-0.65
12	1	48	16	7.819	0.18	0.14	-0.86	-0.75
12	1	50	18	7.824	0.18	0.14	-0.84	-0.73
12	1	52	20	7.803	0.16	0.13	-0.90	-0.79
12	1	54	22	7.792	0.15	0.12	-0.93	-0.82
12	1	56	24	7.787	0.15	0.11	-0.94	-0.83
12	1	58	26	7.797	0.16	0.12	-0.91	-0.80
12	2	0	28	7.793	0.15	0.12	-0.92	-0.82
12	2	2	30	7.774	0.13	0.10	-0.98	-0.87
12	2	4	32	7.770	0.13	0.10	-0.99	-0.89
12	2	6	34	7.773	0.13	0.10	-0.99	-0.88
12	2	8	36	7.767	0.13	0.10	-1.01	-0.90
12	2	10	38	7.745	0.10	0.08	-1.09	-0.98
12	2	12	40	7.744	0.10	0.08	-1.09	-0.98
12	2	14	42	7.749	0.11	0.09	-1.07	-0.96
12	2	16	44	7.742	0.10	0.08	-1.10	-0.99
12	2	18	46	7.756	0.12	0.09	-1.04	-0.94
12	2	20	48	7.741	0.10	0.08	-1.10	-0.99
12	2	22	50	7.736	0.10	0.07	-1.13	-1.02
12	2	24	52	7.740	0.10	0.08	-1.11	-1.00
12	2	26	54	7.731	0.09	0.07	-1.15	-1.04
12	2	28	56	7.734	0.09	0.07	-1.13	-1.03
12	2	30	58	7.731	0.09	0.07	-1.15	-1.04
12	2	32	60	7.739	0.10	0.08	-1.11	-1.00
12	2	34	62	7.728	0.09	0.07	-1.16	-1.05
12	2	36	64	7.727	0.09	0.07	-1.17	-1.06
12	2	38	66	7.723	0.08	0.06	-1.19	-1.08

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90

CASING	DIAMETER=	8.2 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	4.82 FEET
INITIAL WATER ABOVE TRANS.=		7.64 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
12	2	42	70	7.738	0.10	0.08	-1.12	-1.01	
12	2	44	72	7.735	0.09	0.07	-1.13	-1.02	
12	2	46	74	7.715	0.07	0.06	-1.24	-1.13	
12	2	48	76	7.713	0.07	0.06	-1.24	-1.13	
12	2	50	78	7.721	0.08	0.06	-1.20	-1.09	
12	2	52	80	7.722	0.08	0.06	-1.20	-1.09	
12	2	54	82	7.714	0.07	0.06	-1.24	-1.13	
12	2	56	84	7.719	0.08	0.06	-1.21	-1.10	
12	2	58	86	7.709	0.07	0.05	-1.27	-1.16	
12	3	0	88	7.729	0.09	0.07	-1.16	-1.05	
12	3	2	90	7.710	0.07	0.05	-1.27	-1.16	
12	3	4	92	7.715	0.08	0.06	-1.23	-1.12	
12	3	6	94	7.702	0.06	0.05	-1.32	-1.21	
12	3	8	96	7.709	0.07	0.05	-1.27	-1.16	
12	3	10	98	7.698	0.06	0.04	-1.35	-1.24	
12	3	12	100	7.706	0.07	0.05	-1.29	-1.18	
12	3	14	102	7.708	0.07	0.05	-1.28	-1.17	
12	3	20	108	7.705	0.06	0.05	-1.30	-1.19	
12	3	25	113	7.700	0.06	0.05	-1.33	-1.22	
12	3	30	118	7.701	0.06	0.05	-1.32	-1.22	
12	3	35	123	7.706	0.07	0.05	-1.29	-1.18	
12	3	40	128	7.694	0.05	0.04	-1.37	-1.26	
12	3	45	133	7.702	0.06	0.05	-1.31	-1.20	
12	3	50	138	7.705	0.06	0.05	-1.30	-1.19	
12	3	55	143	7.699	0.06	0.05	-1.34	-1.23	
12	4	0	148	7.691	0.05	0.04	-1.40	-1.29	
12	4	5	153	7.691	0.05	0.04	-1.40	-1.29	
12	4	10	158	7.689	0.05	0.04	-1.42	-1.31	
12	4	15	163	7.689	0.05	0.04	-1.42	-1.31	
12	4	20	168	7.697	0.06	0.04	-1.35	-1.24	
12	4	25	173	7.690	0.05	0.04	-1.41	-1.30	
12	4	30	178	7.689	0.05	0.04	-1.42	-1.31	
12	4	35	183	7.689	0.05	0.04	-1.42	-1.31	
12	4	40	188	7.696	0.06	0.04	-1.36	-1.25	
12	4	45	193	7.688	0.05	0.04	-1.42	-1.32	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90

CASING	DIAMETER=	8.2 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	4.82 FEET
INITIAL WATER ABOVE TRANS.=		7.64 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
12	4	50	198	7.686	0.05	0.04	-1.44	-1.33
12	4	55	203	7.686	0.05	0.04	-1.45	-1.34
12	5	0	208	7.693	0.05	0.04	-1.38	-1.27
12	5	5	213	7.697	0.06	0.04	-1.35	-1.25
12	5	10	218	7.684	0.04	0.03	-1.46	-1.35
12	5	15	223	7.686	0.05	0.04	-1.44	-1.34
12	5	20	228	7.691	0.05	0.04	-1.40	-1.29
12	5	25	233	7.684	0.04	0.03	-1.46	-1.35
12	5	30	238	7.682	0.04	0.03	-1.48	-1.37
12	5	40	248	7.682	0.04	0.03	-1.48	-1.37
12	5	42	250	7.689	0.05	0.04	-1.42	-1.31
12	5	44	252	7.676	0.04	0.03	-1.55	-1.44
12	6	0	268	7.686	0.05	0.04	-1.44	-1.34
12	6	2	270	7.684	0.04	0.03	-1.47	-1.36
12	6	4	272	7.674	0.03	0.03	-1.58	-1.47
12	6	6	274	7.664	0.02	0.02	-1.72	-1.61
12	6	8	276	7.664	0.02	0.02	-1.72	-1.61

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90

CASING	DIAMETER=	8.2 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	4.82 FEET
INITIAL WATER ABOVE TRANS.=		7.64 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
12	6	10	0	6.050	1.59	1.00 **	0.00	0.20
12	6	12	2	6.189	1.45	0.91	-0.04	0.16
12	6	14	4	6.303	1.34	0.84	-0.08	0.13
12	6	16	6	6.427	1.21	0.76	-0.12	0.08
12	6	18	8	6.522	1.12	0.70	-0.15	0.05
12	6	20	10	6.594	1.05	0.66	-0.18	0.02
12	6	22	12	6.662	0.98	0.62	-0.21	-0.01
12	6	24	14	6.749	0.89	0.56	-0.25	-0.05
12	6	26	16	6.805	0.83	0.52	-0.28	-0.08
12	6	28	18	6.864	0.78	0.49	-0.31	-0.11
12	6	30	20	6.919	0.72	0.45	-0.34	-0.14
12	6	32	22	6.970	0.67	0.42	-0.38	-0.17
12	6	34	24	7.016	0.62	0.39	-0.41	-0.20
12	6	36	26	7.058	0.58	0.37	-0.44	-0.24
12	6	38	28	7.100	0.54	0.34	-0.47	-0.27
12	6	40	30	7.145	0.49	0.31	-0.51	-0.31
12	6	42	32	7.174	0.47	0.29	-0.53	-0.33
12	6	44	34	7.208	0.43	0.27	-0.57	-0.36
12	6	46	36	7.237	0.40	0.25	-0.60	-0.40
12	6	48	38	7.267	0.37	0.23	-0.63	-0.43
12	6	50	40	7.295	0.34	0.22	-0.66	-0.46
12	6	52	42	7.321	0.32	0.20 **	-0.70	-0.50
12	6	54	44	7.341	0.30	0.19	-0.73	-0.52
12	6	56	46	7.358	0.28	0.18	-0.75	-0.55
12	6	58	48	7.376	0.26	0.17	-0.78	-0.58
12	7	0	50	7.397	0.24	0.15	-0.82	-0.61
12	7	2	52	7.407	0.23	0.15	-0.83	-0.63
12	7	4	54	7.422	0.22	0.14	-0.86	-0.66
12	7	6	56	7.434	0.21	0.13	-0.89	-0.69
12	7	8	58	7.449	0.19	0.12	-0.92	-0.72
12	7	10	60	7.454	0.19	0.12	-0.93	-0.73
12	7	12	62	7.467	0.17	0.11	-0.96	-0.76
12	7	14	64	7.471	0.17	0.11	-0.97	-0.77
12	7	16	66	7.479	0.16	0.10	-0.99	-0.79

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90
 CASING DIAMETER= 8.2 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 4.82 FEET
 INITIAL WATER ABOVE TRANS.= 7.64 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)			
12	7	18	68	7.489	0.15	0.10	-1.02	-0.82
12	7	20	70	7.491	0.15	0.09	-1.03	-0.83
12	7	22	72	7.500	0.14	0.09	-1.06	-0.85
12	7	24	74	7.510	0.13	0.08	-1.09	-0.88
12	7	26	76	7.511	0.13	0.08	-1.09	-0.89
12	7	28	78	7.518	0.12	0.08	-1.12	-0.91
12	7	30	80	7.522	0.12	0.07	-1.13	-0.93
12	7	32	82	7.522	0.12	0.07	-1.13	-0.93
12	7	34	84	7.534	0.11	0.07	-1.17	-0.97
12	7	36	86	7.536	0.10	0.07	-1.18	-0.98
12	7	38	88	7.531	0.11	0.07	-1.16	-0.96
12	7	40	90	7.545	0.10	0.06	-1.22	-1.02
12	7	42	92	7.557	0.08	0.05	-1.28	-1.08
12	7	44	94	7.552	0.09	0.06	-1.26	-1.06
12	7	46	96	7.555	0.09	0.05	-1.27	-1.07
12	7	48	98	7.554	0.09	0.05	-1.27	-1.06
12	7	50	100	7.567	0.07	0.05	-1.34	-1.14
12	7	52	102	7.565	0.08	0.05	-1.32	-1.12
12	7	54	104	7.566	0.07	0.05	-1.33	-1.13
12	7	56	106	7.567	0.07	0.05	-1.34	-1.14
12	7	58	108	7.574	0.07	0.04	-1.38	-1.18
12	8	0	110	7.570	0.07	0.04	-1.36	-1.15
12	8	2	112	7.578	0.06	0.04	-1.41	-1.20
12	8	4	114	7.580	0.06	0.04	-1.42	-1.22
12	8	6	116	7.580	0.06	0.04	-1.42	-1.22
12	8	8	118	7.585	0.06	0.03	-1.46	-1.26
12	8	10	120	7.593	0.05	0.03	-1.53	-1.33
12	8	12	122	7.591	0.05	0.03	-1.51	-1.31
12	8	14	124	7.595	0.05	0.03	-1.55	-1.35
12	8	16	126	7.590	0.05	0.03	-1.51	-1.30
12	8	18	128	7.588	0.05	0.03	-1.49	-1.29
12	8	20	130	7.602	0.04	0.02	-1.63	-1.42
12	8	22	132	7.599	0.04	0.03	-1.59	-1.39
12	8	24	134	7.604	0.04	0.02	-1.65	-1.45
12	8	26	136	7.607	0.03	0.02	-1.69	-1.48

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90
 CASING DIAMETER= 8.2 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 4.82 FEET
 INITIAL WATER ABOVE TRANS.= 7.64 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
12	8	28	138	7.610	0.03	0.02	-1.72	-1.52
12	8	30	140	7.607	0.03	0.02	-1.68	-1.48
12	8	32	142	7.604	0.04	0.02	-1.65	-1.45
12	8	34	144	7.600	0.04	0.02	-1.60	-1.40
12	8	36	146	7.606	0.03	0.02	-1.67	-1.47
12	8	38	148	7.610	0.03	0.02	-1.73	-1.53

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90
CASING DIAMETER= 8.2 INCHES
SAND DIAMETER= 12 INCHES
OPEN INTERVAL= 4.82 FEET
INITIAL WATER ABOVE TRANS.= 7.64 FEET

24-HR CLOCK TIME	HOURS	MINUTES	SECONDS	WATER			LOG		
				ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 5.56E-02 CM/SEC FALLING HEAD*

K= 3.20E-02 CM/SEC RISING HEAD**

OW-41

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-41

DATE= 11/07/90

CASING	DIAMETER=	7.04 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	11.6 FEET
INITIAL WATER ABOVE TRANS.=		7.5 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.		HEAD (FEET)	HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD				

FALLING HEAD TEST

14	29	10	0	8.001	0.50	1.00	0.00	-0.30
14	29	12	2	7.840	0.34	0.68	-0.17	-0.47
14	29	14	4	7.771	0.27	0.54	-0.27	-0.57
14	29	16	6	7.734	0.23	0.47	-0.33	-0.63
14	29	18	8	7.702	0.20	0.40	-0.39	-0.69
14	29	20	10	7.683	0.18	0.36	-0.44	-0.74
14	29	22	12	7.672	0.17	0.34	-0.47	-0.76
14	29	24	14	7.660	0.16	0.32	-0.49	-0.79
14	29	26	16	7.650	0.15	0.30	-0.52	-0.82
14	29	28	18	7.637	0.14	0.27	-0.56	-0.86
14	29	30	20	7.665	0.17	0.33	-0.48	-0.78
14	29	32	22	7.628	0.13	0.26	-0.59	-0.89
14	29	34	24	7.630	0.13	0.26	-0.59	-0.89
14	29	36	26	7.620	0.12	0.24	-0.62	-0.92
14	29	38	28	7.618	0.12	0.23	-0.63	-0.93
14	29	40	30	7.626	0.13	0.25	-0.60	-0.90
14	29	42	32	7.646	0.15	0.29	-0.54	-0.84
14	29	44	34	7.612	0.11	0.22	-0.65	-0.95
14	29	46	36	7.644	0.14	0.29	-0.54	-0.84
14	29	48	38	7.622	0.12	0.24	-0.62	-0.92
14	29	50	40	7.619	0.12	0.24	-0.63	-0.93
14	29	52	42	7.611	0.11	0.22	-0.66	-0.96
14	29	54	44	7.642	0.14	0.28	-0.55	-0.85
14	29	56	46	7.613	0.11	0.22	-0.65	-0.95
14	29	58	48	7.642	0.14	0.28	-0.55	-0.85
14	30	0	50	7.606	0.11	0.21	-0.68	-0.98
14	30	2	52	7.608	0.11	0.22	-0.66	-0.96
14	30	4	54	7.620	0.12	0.24	-0.62	-0.92
14	30	6	56	7.619	0.12	0.24	-0.63	-0.93
14	30	8	58	7.619	0.12	0.24	-0.63	-0.93
14	30	10	60	7.586	0.09	0.17	-0.76	-1.06
14	30	12	62	7.641	0.14	0.28	-0.55	-0.85
14	30	14	64	7.614	0.11	0.23	-0.64	-0.94
14	30	16	66	7.618	0.12	0.24	-0.63	-0.93

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-41

DATE- 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 11.6 FEET
 INITIAL WATER ABOVE TRANS.= 7.5 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
14	30	18	68	7.606	0.11	0.21	-0.67	-0.97
14	30	20	70	7.606	0.11	0.21	-0.68	-0.98
14	30	22	72	7.614	0.11	0.23	-0.64	-0.94
14	30	30	80	7.637	0.14	0.27	-0.56	-0.86
14	30	35	85	7.605	0.11	0.21	-0.68	-0.98
14	30	40	90	7.602	0.10	0.20	-0.69	-0.99
14	30	45	95	7.559	0.06	0.12	-0.93	-1.23
14	30	50	100	7.601	0.10	0.20	-0.70	-1.00
14	30	55	105	7.603	0.10	0.21	-0.69	-0.99
14	31	0	110	7.604	0.10	0.21	-0.69	-0.98
14	31	5	115	7.631	0.13	0.26	-0.58	-0.88
14	31	10	120	7.628	0.13	0.26	-0.59	-0.89
14	31	15	125	7.600	0.10	0.20	-0.70	-1.00
14	31	20	130	7.602	0.10	0.20	-0.69	-0.99
14	31	25	135	7.628	0.13	0.26	-0.59	-0.89
14	31	30	140	7.601	0.10	0.20	-0.70	-1.00
14	31	35	145	7.598	0.10	0.20	-0.71	-1.01
14	31	40	150	7.630	0.13	0.26	-0.59	-0.89
14	31	45	155	7.600	0.10	0.20	-0.70	-1.00
14	31	50	160	7.599	0.10	0.20	-0.71	-1.01
14	31	55	165	7.627	0.13	0.25	-0.60	-0.90
14	32	0	170	7.600	0.10	0.20	-0.70	-1.00
14	32	5	175	7.600	0.10	0.20	-0.70	-1.00
14	32	10	180	7.599	0.10	0.20	-0.70	-1.00
14	32	15	185	7.599	0.10	0.20	-0.71	-1.01
14	32	20	190	7.597	0.10	0.19	-0.71	-1.01
14	32	25	195	7.594	0.09	0.19	-0.73	-1.03
14	32	30	200	7.596	0.10	0.19	-0.72	-1.02
14	32	35	205	7.596	0.10	0.19	-0.72	-1.02
14	32	40	210	7.593	0.09	0.19	-0.73	-1.03
14	32	45	215	7.595	0.09	0.19	-0.72	-1.02
14	32	50	220	7.593	0.09	0.19	-0.73	-1.03
14	32	55	225	7.598	0.10	0.20	-0.71	-1.01
14	33	0	230	7.595	0.10	0.19	-0.72	-1.02
14	33	5	235	7.591	0.09	0.18	-0.74	-1.04

DECEMBER 1990

693-6255

VARIABLE HEAD TEST

WELL NO. OW-41

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 11.6 FEET
 INITIAL WATER ABOVE TRANS.= 7.5 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
14	33	10	240	7.591	0.09	0.18	-0.74	-1.04
14	33	15	245	7.622	0.12	0.24	-0.61	-0.91
14	33	35	265	7.587	0.09	0.17	-0.76	-1.06
14	33	40	270	7.585	0.09	0.17	-0.77	-1.07
14	33	45	275	7.585	0.08	0.17	-0.77	-1.07
14	33	58	288	7.588	0.09	0.18	-0.76	-1.06
14	34	0	290	7.586	0.09	0.17	-0.77	-1.07
14	34	2	292	7.590	0.09	0.18	-0.74	-1.04
14	34	4	294	7.580	0.08	0.16	-0.80	-1.10
14	34	6	296	7.341	-0.16	-0.32	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-41

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 11.6 FEET
 INITIAL WATER ABOVE TRANS.= 7.5 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO				
RISING HEAD TEST									
14	34	8	0	6.231	1.27	1.00	**	0.00	0.10
14	34	10	2	6.396	1.10	0.87		-0.06	0.04
14	34	12	4	6.529	0.97	0.77		-0.12	-0.01
14	34	14	6	6.654	0.85	0.67		-0.18	-0.07
14	34	16	8	6.764	0.74	0.58		-0.24	-0.13
14	34	18	10	6.858	0.64	0.51	**	-0.30	-0.19
14	34	20	12	6.945	0.55	0.44		-0.36	-0.26
14	34	22	14	7.023	0.48	0.38		-0.42	-0.32
14	34	24	16	7.103	0.40	0.31		-0.50	-0.40
14	34	26	18	7.161	0.34	0.27		-0.57	-0.47
14	34	28	20	7.187	0.31	0.25		-0.61	-0.50
14	34	30	22	7.236	0.26	0.21		-0.68	-0.58
14	34	32	24	7.265	0.23	0.19		-0.73	-0.63
14	34	34	26	7.317	0.18	0.14		-0.84	-0.74
14	34	36	28	7.315	0.18	0.15		-0.84	-0.73
14	34	38	30	7.332	0.17	0.13		-0.88	-0.78
14	34	40	32	7.356	0.14	0.11		-0.94	-0.84
14	34	42	34	7.369	0.13	0.10		-0.99	-0.88
14	34	44	36	7.385	0.12	0.09		-1.04	-0.94
14	34	46	38	7.389	0.11	0.09		-1.06	-0.95
14	34	48	40	7.402	0.10	0.08		-1.11	-1.01
14	34	50	42	7.406	0.09	0.07		-1.13	-1.03
14	34	52	44	7.449	0.05	0.04		-1.40	-1.29
14	34	54	46	7.453	0.05	0.04		-1.44	-1.33
14	34	56	48	7.428	0.07	0.06		-1.25	-1.14
14	34	58	50	7.432	0.07	0.05		-1.27	-1.17
14	35	0	52	7.472	0.03	0.02		-1.65	-1.55
14	35	2	54	7.441	0.06	0.05		-1.33	-1.23
14	35	4	56	7.480	0.02	0.02		-1.79	-1.69
14	35	6	58	7.449	0.05	0.04		-1.39	-1.29
14	35	8	60	7.455	0.04	0.04		-1.45	-1.35
14	35	10	62	7.486	0.01	0.01		-1.95	-1.85
14	35	12	64	7.455	0.05	0.04		-1.45	-1.34
14	35	14	66	7.465	0.04	0.03		-1.56	-1.45

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-41

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 11.6 FEET
 INITIAL WATER ABOVE TRANS.= 7.5 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG		
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD	
14	35	16	68	7.492	0.01	0.01	-2.18	-2.08	
14	35	18	70	7.467	0.03	0.03	-1.59	-1.48	
14	35	22	74	7.474	0.03	0.02	-1.69	-1.59	
14	35	24	76	7.469	0.03	0.02	-1.62	-1.51	
14	35	26	78	7.470	0.03	0.02	-1.63	-1.52	
14	35	28	80	7.508	-0.01	-0.01	ERR	ERR	
14	35	30	82	7.475	0.02	0.02	-1.71	-1.61	
14	35	32	84	7.483	0.02	0.01	-1.88	-1.78	
14	35	34	86	7.484	0.02	0.01	-1.90	-1.80	
14	35	36	88	7.483	0.02	0.01	-1.88	-1.78	
14	35	38	90	7.484	0.02	0.01	-1.89	-1.78	
14	35	40	92	7.488	0.01	0.01	-2.02	-1.92	
14	35	42	94	7.480	0.02	0.02	-1.81	-1.71	
14	35	44	96	7.485	0.02	0.01	-1.92	-1.82	
14	35	46	98	7.490	0.01	0.01	-2.10	-2.00	
14	35	48	100	7.492	0.01	0.01	-2.18	-2.08	
14	36	0	112	7.522	-0.02	-0.02	ERR	ERR	
14	36	5	117	7.490	0.01	0.01	-2.12	-2.02	
14	36	10	122	7.523	-0.02	-0.02	ERR	ERR	
14	36	15	127	7.491	0.01	0.01	-2.16	-2.06	
14	36	20	132	7.496	0.00	0.00	-2.52	-2.42	
14	36	25	137	7.499	0.00	0.00	-3.19	-3.08	
14	36	30	142	7.497	0.00	0.00	-2.63	-2.53	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-41

DATE= 11/07/90
CASING DIAMETER= 7.04 INCHES
SAND DIAMETER= 10 INCHES
OPEN INTERVAL= 11.6 FEET
INITIAL WATER ABOVE TRANS.= 7.5 FEET

24-HR CLOCK TIME	ELAPSED	WATER			LOG		
		TIME	TRANS.	HEAD	HEAD	HEAD	LOG
HOURS	MINUTES	SECONDS	(SEC)	(FEET)	RATIO	RATIO	HEAD
-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.69E-02 CM/SEC FALLING HEAD*

K= 2.56E-02 CM/SEC RISING HEAD**

OW-42

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-42

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 15 FEET
 INITIAL WATER ABOVE TRANS.= 13.25 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
16	39	12	0	14.548	1.30	1.00	0	0.113357
16	39	14	2	14.088	0.84	0.65	-0.19009	-0.07673
16	39	16	4	14.322	1.07	0.83	-0.08332	0.030033
16	39	18	6	14.439	1.19	0.92	-0.03806	0.075294
16	39	20	8	14.125	0.88	0.67	-0.17125	-0.05789
16	39	22	10	14.035	0.78	0.60	-0.21864	-0.10528
16	39	24	12	13.892	0.64	0.49	-0.30576	-0.19240
16	39	26	14	14.004	0.75	0.58	-0.23570	-0.12235
16	39	28	16	13.794	0.54	0.42	-0.37758	-0.26422
16	39	30	18	13.819	0.57	0.44	-0.35795	-0.24459
16	39	32	20	14.011	0.76	0.59	-0.23200	-0.11864
16	39	34	22	13.720	0.47	0.36	-0.44113	-0.32777
16	39	36	24	13.791	0.54	0.42	-0.38016	-0.26680
16	39	38	26	13.990	0.74	0.57	-0.24402	-0.13066
16	39	40	28	13.879	0.63	0.48	-0.31491	-0.20155
16	39	42	30	13.626	0.38	0.29	-0.53793	-0.42457
16	39	44	32	13.789	0.54	0.42	-0.38183	-0.26847
16	39	46	34	13.784	0.53	0.41	-0.38576	-0.27240
16	39	48	36	13.487	0.24	0.18	-0.73940	-0.62604
16	39	50	38	13.644	0.39	0.30	-0.51840	-0.40504
16	39	52	40	13.489	0.24	0.18	-0.73476	-0.62140
16	39	54	42	13.551	0.30	0.23	-0.63418	-0.52082
16	39	56	44	13.394	0.14	0.11	-0.95425	-0.84089
16	39	58	46	13.668	0.42	0.32	-0.49268	-0.37932
16	40	0	48	13.480	0.23	0.18	-0.75230	-0.63894
16	40	2	50	13.403	0.15	0.12	-0.92796	-0.81460
16	40	4	52	13.338	0.09	0.07	-1.16921	-1.05585
16	40	6	54	13.569	0.32	0.25	-0.60993	-0.49657
16	40	8	56	13.344	0.09	0.07	-1.14160	-1.02825
16	40	10	58	13.415	0.17	0.13	-0.89460	-0.78125
16	40	12	60	13.312	0.06	0.05	-1.31877	-1.20541
16	40	14	62	13.518	0.27	0.21	-0.68454	-0.57118
16	40	16	64	13.270	0.02	0.02	-1.80569	-1.69234
16	40	18	66	13.419	0.17	0.13	-0.88621	-0.77285

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-42

DATE= 11/08/90

CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	15 FEET
INITIAL WATER ABOVE TRANS.=		13.25 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG	
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
16	40	20	68	13.245	-0.01	-0.00	ERR	ERR
16	40	22	70	13.502	0.25	0.19	-0.71230	-0.59894
16	40	24	72	13.547	0.30	0.23	-0.64020	-0.52685
16	40	26	74	13.424	0.17	0.13	-0.87333	-0.75997
16	40	28	76	13.227	-0.02	-0.02	ERR	ERR
16	40	30	78	13.424	0.17	0.13	-0.87160	-0.75824
16	40	32	80	13.199	-0.05	-0.04	ERR	ERR
16	40	34	82	13.440	0.19	0.15	-0.83420	-0.72084
16	40	36	84	13.213	-0.04	-0.03	ERR	ERR
16	40	38	86	13.414	0.16	0.13	-0.89825	-0.78490
16	40	40	88	13.172	-0.08	-0.06	ERR	ERR
16	40	42	90	13.259	0.01	0.01	-2.15919	-2.04583
16	40	44	92	13.179	-0.07	-0.05	ERR	ERR
16	40	46	94	13.193	-0.06	-0.04	ERR	ERR
16	40	48	96	13.208	-0.04	-0.03	ERR	ERR
16	40	50	98	13.342	0.09	0.07	-1.15134	-1.03798
16	40	52	100	13.249	-0.00	-0.00	ERR	ERR
16	40	54	102	13.122	-0.13	-0.10	ERR	ERR
16	40	56	104	13.389	0.14	0.11	-0.96981	-0.85645
16	40	58	106	13.283	0.03	0.03	-1.60093	-1.48758
16	41	0	108	13.404	0.15	0.12	-0.92600	-0.81264
16	41	2	110	13.142	-0.11	-0.08	ERR	ERR
16	41	4	112	13.228	-0.02	-0.02	ERR	ERR
16	41	6	114	13.110	-0.14	-0.11	ERR	ERR
16	41	8	116	13.438	0.19	0.14	-0.83897	-0.72561
16	41	10	118	13.135	-0.11	-0.09	ERR	ERR
16	41	12	120	13.353	0.10	0.08	-1.09982	-0.98646
16	41	14	122	13.093	-0.16	-0.12	ERR	ERR
16	41	16	124	13.343	0.09	0.07	-1.14375	-1.03039
16	41	18	126	13.149	-0.10	-0.08	ERR	ERR
16	41	20	128	13.192	-0.06	-0.04	ERR	ERR
16	41	22	130	13.082	-0.17	-0.13	ERR	ERR
16	41	24	132	13.317	0.07	0.05	-1.28475	-1.17139
16	41	26	134	13.212	-0.04	-0.03	ERR	ERR
16	41	28	136	13.323	0.07	0.06	-1.24771	-1.13435

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-42

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 15 FEET
 INITIAL WATER ABOVE TRANS.= 13.25 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
16	41	30	138	13.217	-0.03	-0.03	ERR	ERR
16	41	32	140	13.343	0.09	0.07	-1.14590	-1.03255
16	41	34	142	13.051	-0.20	-0.15	ERR	ERR
16	41	36	144	13.088	-0.16	-0.12	ERR	ERR
16	41	38	146	13.074	-0.18	-0.14	ERR	ERR
16	42	0	168	13.164	-0.09	-0.07	ERR	ERR
16	42	2	170	13.157	-0.09	-0.07	ERR	ERR
16	42	4	172	13.393	0.14	0.11	-0.95703	-0.84368

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-42

DATE= 11/08/90

CASING DIAMETER= 4 INCHES

SAND DIAMETER= 12 INCHES

OPEN INTERVAL= 15 FEET

INITIAL WATER ABOVE TRANS.= 13.25 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG		
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD	
RISING HEAD TEST									
16	42	10	0	11.825	1.42	1.00	**	0	0.153732
16	42	12	2	12.073	1.18	0.83	-0.08284	0.070892	
16	42	14	4	12.109	1.14	0.80	-0.09641	0.057315	
16	42	16	6	12.027	1.22	0.86	-0.06630	0.087430	
16	42	18	8	12.204	1.05	0.73	-0.13430	0.019431	
16	42	20	10	11.920	1.33	0.93	-0.02992	0.123809	
16	42	22	12	12.259	0.99	0.70	-0.15773	-0.00400	
16	42	24	14	12.424	0.83	0.58	-0.23685	-0.08312	
16	42	26	16	12.252	1.00	0.70	-0.15440	-0.00067	
16	42	28	18	12.242	1.01	0.71	-0.15021	0.003519	
16	42	30	20	12.576	0.67	0.47	-0.32511	-0.17137	
16	42	32	22	12.378	0.87	0.61	-0.21334	-0.05961	
16	42	34	24	12.221	1.03	0.72	-0.14116	0.012571	
16	42	36	26	12.264	0.99	0.69	-0.15976	-0.00603	
16	42	38	28	12.415	0.83	0.59	-0.23226	-0.07853	
16	42	40	30	12.682	0.57	0.40	-0.39938	-0.24565	
16	42	42	32	12.384	0.87	0.61	-0.21634	-0.06261	
16	42	44	34	12.406	0.84	0.59	-0.22725	-0.07351	
16	42	46	36	12.411	0.84	0.59	-0.22999	-0.07625	
16	42	48	38	12.416	0.83	0.59	-0.23274	-0.07901	
16	42	50	40	12.636	0.61	0.43	-0.36528	-0.21155	
16	42	52	42	12.738	0.51	0.36	-0.44414	-0.29040	
16	42	54	44	12.461	0.79	0.55	-0.25672	-0.10299	
16	42	56	46	12.586	0.66	0.47	-0.33125	-0.17752	
16	42	58	48	12.591	0.66	0.46	-0.33473	-0.18100	
16	43	0	50	12.808	0.44	0.31	-0.50877	-0.35504	
16	43	2	52	12.689	0.56	0.39	** -0.40471	-0.25097	
16	43	4	54	12.754	0.50	0.35	-0.45785	-0.30412	
16	43	6	56	12.589	0.66	0.46	-0.33337	-0.17963	
16	43	8	58	12.568	0.68	0.48	-0.32023	-0.16649	
16	43	10	60	12.911	0.34	0.24	-0.62376	-0.47003	
16	43	12	62	12.984	0.27	0.19	-0.72941	-0.57568	
16	43	14	64	12.856	0.39	0.28	-0.55775	-0.40401	
16	43	16	66	12.691	0.56	0.39	-0.40614	-0.25240	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-42

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 15 FEET
 INITIAL WATER ABOVE TRANS.= 13.25 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
16	43	18	68	12.638	0.61	0.43	-0.36692	-0.21318
16	43	20	70	12.655	0.59	0.42	-0.37954	-0.22581
16	43	22	72	12.905	0.35	0.24	-0.61585	-0.46211
16	43	24	74	12.633	0.62	0.43	-0.36365	-0.20992
16	43	26	76	12.694	0.56	0.39	-0.40829	-0.25456
16	43	28	78	12.996	0.25	0.18	-0.74949	-0.59576
16	43	30	80	12.683	0.57	0.40	-0.40026	-0.24653
16	43	32	82	12.935	0.31	0.22	-0.65567	-0.50194
16	43	34	84	12.843	0.41	0.29	-0.54399	-0.39026
16	43	36	86	12.885	0.37	0.26	-0.59101	-0.43727
16	43	38	88	12.955	0.29	0.21	-0.68430	-0.53056
16	43	40	90	13.033	0.22	0.15	-0.81644	-0.66270
16	43	42	92	12.710	0.54	0.38	-0.42127	-0.26754
16	43	44	94	12.760	0.49	0.34	-0.46395	-0.31022
16	43	46	96	13.062	0.19	0.13	-0.88040	-0.72666
16	43	48	98	12.769	0.48	0.34	-0.47118	-0.31744
16	43	50	100	12.807	0.44	0.31	-0.50764	-0.35391
16	43	52	102	12.821	0.43	0.30	-0.52121	-0.36748
16	43	54	104	12.772	0.48	0.34	-0.47410	-0.32037
16	43	56	106	12.832	0.42	0.29	-0.53209	-0.37836
16	43	58	108	12.898	0.35	0.25	-0.60665	-0.45292
16	44	0	110	12.922	0.33	0.23	-0.63728	-0.48355
16	44	2	112	12.801	0.45	0.32	-0.50112	-0.34739
16	44	4	114	12.865	0.39	0.27	-0.56777	-0.41404
16	44	6	116	13.141	0.11	0.08	-1.11746	-0.96373

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. OW-42

DATE= 11/08/90
CASING DIAMETER= 4 INCHES
SAND DIAMETER= 12 INCHES
OPEN INTERVAL= 15 FEET
INITIAL WATER ABOVE TRANS.= 13.25 FEET

24-HR CLOCK TIME	ELAPSED TIME HOURS	SECONDS	WATER ABOVE TRANS.			HEAD (FEET)	HEAD RATIO	LOG HEAD RATIO	LOG HEAD		
			(SEC)	(FEET)	(FEET)						
-----			-----			-----			-----		

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 2.37E-03 CM/SEC FALLING HEAD*

K= 1.72E-03 CM/SEC RISING HEAD**

P-1A (TW-1S)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-1S

DATE= 11/08/90

CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 10 FEET
 INITIAL WATER ABOVE TRANS.= 14.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)				
FALLING HEAD TEST									
10	31	2	0	15.726	0.83	1.00	0	-0.08281	
10	31	3	1	15.079	0.18	0.22	-0.66466	-0.74748	
10	31	4	2	14.532	-0.37	-0.44	ERR	ERR	
10	31	5	3	14.738	-0.16	-0.20	ERR	ERR	
10	31	6	4	14.847	-0.05	-0.06	ERR	ERR	
10	31	7	5	14.772	-0.13	-0.15	ERR	ERR	
10	31	8	6	15.080	0.18	0.22	-0.66206	-0.74488	
10	31	9	7	14.996	0.10	0.12	-0.93593	-1.01875	
10	31	10	8	14.664	-0.24	-0.29	ERR	ERR	
10	31	11	9	14.608	-0.29	-0.35	ERR	ERR	
10	31	12	10	14.730	-0.17	-0.21	ERR	ERR	
10	31	13	11	14.715	-0.18	-0.22	ERR	ERR	
10	31	14	12	14.715	-0.19	-0.22	ERR	ERR	
10	31	15	13	15.005	0.11	0.13	-0.89508	-0.97789	
10	31	16	14	14.982	0.08	0.10	-1.00092	-1.08374	
10	31	17	15	14.742	-0.16	-0.19	ERR	ERR	
10	31	18	16	14.804	-0.10	-0.12	ERR	ERR	
10	31	26	24	14.870	-0.03	-0.04	ERR	ERR	
10	31	27	25	15.019	0.12	0.14	-0.84256	-0.92537	
10	31	28	26	14.969	0.07	0.08	-1.07873	-1.16155	
10	31	29	27	14.813	-0.09	-0.11	ERR	ERR	
10	31	30	28	14.865	-0.03	-0.04	ERR	ERR	
10	31	31	29	14.737	-0.16	-0.20	ERR	ERR	
10	31	32	30	15.020	0.12	0.14	-0.83943	-0.92224	
10	31	33	31	14.720	-0.18	-0.22	ERR	ERR	
10	31	34	32	14.890	-0.01	-0.01	ERR	ERR	
10	31	35	33	14.657	-0.24	-0.29	ERR	ERR	
10	31	36	34	14.187	-0.71	-0.86	ERR	ERR	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-1S

DATE= 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	10 FEET
INITIAL WATER ABOVE TRANS.=		14.9 FEET

24-HR CLOCK TIME			WATER				LOG	
HOURS	MINUTES	SECONDS	ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD

RISING HEAD TEST

10	31	37	0	13.756	-1.14	1.00	**	0	ERR
10	31	38	1	14.544	-0.36	0.31		-0.50673	ERR
10	31	39	2	14.423	-0.48	0.42		-0.38002	ERR
10	31	40	3	14.722	-0.18	0.16	**	-0.80700	ERR
10	31	41	4	14.663	-0.24	0.21		-0.68362	ERR
10	31	42	5	14.662	-0.24	0.21		-0.68165	ERR
10	31	43	6	14.521	-0.38	0.33		-0.47983	ERR
10	31	44	7	14.691	-0.21	0.18		-0.73892	ERR
10	31	45	8	14.699	-0.20	0.18		-0.75532	ERR
10	31	46	9	14.918	0.02	-0.02		ERR	-1.73323
10	31	47	10	14.917	0.02	-0.01		ERR	-1.77473
10	31	48	11	14.781	-0.12	0.10		-0.98311	ERR
10	31	49	12	14.718	-0.18	0.16		-0.79923	ERR
10	31	50	13	14.689	-0.21	0.18		-0.73360	ERR
10	31	51	14	14.654	-0.25	0.22		-0.66664	ERR
10	31	52	15	14.917	0.02	-0.02		ERR	-1.76461
10	31	53	16	14.725	-0.18	0.15		-0.81491	ERR
10	31	54	17	14.876	-0.02	0.02		-1.67381	ERR
10	31	55	18	14.710	-0.19	0.17		-0.78014	ERR
10	31	56	19	14.840	-0.06	0.05		-1.28264	ERR
10	31	57	20	15.048	0.15	-0.13		ERR	-0.82989
10	31	58	21	14.945	0.05	-0.04		ERR	-1.34577

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-1S

DATE- 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	10 FEET
INITIAL WATER ABOVE TRANS.=	14.9 FEET	

24-HR CLOCK TIME	ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
		HOURS	MINUTES	SECONDS		
-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.20E-02 CM/SEC FALLING HEAD*

K= 2.42E-02 CM/SEC RISING HEAD**

P-1B(TW-1D)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-1D

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 16.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
10	21	28	0	19.332	2.93	1.00	0	0.467101
10	21	29	1	17.890	1.49	0.51	-0.29387	0.173225
10	21	30	2	17.318	0.92	0.31	-0.50411	-0.03701
10	21	31	3	17.067	0.67	0.23	-0.64299	-0.17589
10	21	32	4	16.978	0.58	0.20	-0.70491	-0.23781
10	21	33	5	16.841	0.44	0.15	-0.82223	-0.35513
10	21	34	6	16.781	0.38	0.13	-0.88655	-0.41944
10	21	35	7	16.679	0.28	0.10	-1.02104	-0.55394
10	21	36	8	16.391	-0.01	-0.00	ERR	ERR
10	21	37	9	16.630	0.23	0.08	-1.10569	-0.63858
10	21	38	10	16.628	0.23	0.08	-1.10875	-0.64165
10	21	39	11	16.532	0.13	0.05	-1.34585	-0.87875
10	21	40	12	16.560	0.16	0.05	-1.26262	-0.79552
10	21	41	13	16.372	-0.03	-0.01	ERR	ERR
10	21	42	14	16.373	-0.03	-0.01	ERR	ERR
10	21	43	15	16.515	0.11	0.04	-1.40680	-0.93970
10	21	44	16	16.259	-0.14	-0.05	ERR	ERR
10	21	45	17	16.456	0.06	0.02	-1.71681	-1.24971
10	21	46	18	16.386	-0.01	-0.00	ERR	ERR
10	21	47	19	16.282	-0.12	-0.04	ERR	ERR
10	21	48	20	16.401	0.00	0.00	-3.42193	-2.95483
10	21	49	21	16.282	-0.12	-0.04	ERR	ERR
10	21	50	22	16.370	-0.03	-0.01	ERR	ERR
10	21	51	23	16.217	-0.18	-0.06	ERR	ERR
10	21	52	24	16.279	-0.12	-0.04	ERR	ERR
10	21	53	25	16.323	-0.08	-0.03	ERR	ERR
10	21	54	26	16.223	-0.18	-0.06	ERR	ERR
10	21	55	27	16.283	-0.12	-0.04	ERR	ERR
10	21	56	28	16.487	0.09	0.03	-1.52889	-1.06179
10	21	57	29	16.336	-0.06	-0.02	ERR	ERR
10	21	58	30	16.524	0.12	0.04	-1.37243	-0.90533
10	21	59	31	16.338	-0.06	-0.02	ERR	ERR
10	22	0	32	16.542	0.14	0.05	-1.31583	-0.84873
10	22	1	33	16.455	0.06	0.02	-1.72581	-1.25871

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-1D

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 16.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG	
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	HEAD RATIO	LOG HEAD
10	22	2	34	16.549	0.15	0.05	-1.29443	-0.82733
10	22	3	35	16.243	-0.16	-0.05	ERR	ERR
10	22	4	36	16.258	-0.14	-0.05	ERR	ERR
10	22	5	37	16.248	-0.15	-0.05	ERR	ERR
10	22	6	38	16.459	0.06	0.02	-1.69765	-1.23055
10	22	7	39	16.559	0.16	0.05	-1.26450	-0.79740
10	22	8	40	16.588	0.19	0.06	-1.19227	-0.72517
10	22	9	41	16.275	-0.12	-0.04	ERR	ERR
10	22	10	42	16.361	-0.04	-0.01	ERR	ERR
10	22	11	43	16.300	-0.10	-0.03	ERR	ERR
10	22	14	46	16.739	0.34	0.12	-0.93690	-0.46979
10	22	15	47	16.301	-0.10	ERR	ERR	ERR
10	22	16	48	16.163	-0.24	ERR	ERR	ERR
10	22	17	49	16.017	-0.38	ERR	ERR	ERR
10	22	18	50	15.720	-0.68	ERR	ERR	ERR
10	22	19	51	15.006	-1.39	ERR	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-1D

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 16.4 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
10	22	20	0	14.835	-1.56	1.00	0	ERR
10	22	21	1	15.278	-1.12	0.72	-0.14432	ERR
10	22	22	2	15.579	-0.82	0.52	** -0.28025	ERR
10	22	23	3	15.783	-0.62	0.39	-0.40404	ERR
10	22	24	4	15.877	-0.52	0.33	-0.47613	ERR
10	22	25	5	15.907	-0.49	0.31	-0.50170	ERR
10	22	26	6	16.045	-0.36	0.23	-0.64366	ERR
10	22	27	7	16.099	-0.30	0.19	-0.71562	ERR
10	22	28	8	16.241	-0.16	0.10	-0.99290	ERR
10	22	29	9	16.182	-0.22	0.14	-0.85572	ERR
10	22	30	10	16.254	-0.15	0.09	-1.03108	ERR
10	22	31	11	16.271	-0.13	0.08	** -1.08445	ERR
10	22	32	12	16.417	0.02	-0.01	ERR	-1.76866
10	22	33	13	16.436	0.04	-0.02	ERR	-1.43863
10	22	34	14	16.559	0.16	-0.10	ERR	-0.79803
10	22	35	15	16.423	0.02	-0.02	ERR	-1.62898
10	22	36	16	16.514	0.11	-0.07	ERR	-0.94408
10	22	37	17	16.493	0.09	-0.06	ERR	-1.03274
10	22	38	18	16.343	-0.06	0.04	-1.44173	ERR
10	22	39	19	16.453	0.05	-0.03	ERR	-1.27539
10	22	40	20	16.347	-0.05	0.03	-1.47104	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-1D

DATE= 11/08/90
CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES
OPEN INTERVAL= 40.0 FEET
INITIAL WATER ABOVE TRANS.= 16.4 FEET

24-HR CLOCK TIME	ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
		HOURS	MINUTES	SECONDS		
-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 3.20E-03 CM/SEC FALLING HEAD*

K= 2.76E-03 CM/SEC RISING HEAD**

P-2A (TW-2S)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2S

DATE= 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	10.0 FEET
INITIAL WATER ABOVE TRANS.= 18.2 FEET		

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		

FALLING HEAD TEST

9	56	6.5	0	19.77	1.57	1.00	*	0
9	56	7.5	1	18.77	0.57	0.36	-	-0.43845
9	56	8.5	2	18.34	0.14	0.09	*	-1.06067
9	56	9.5	3	18.50	0.30	0.19	-	-0.71632
9	56	10.5	4	18.54	0.34	0.22	-	-0.65974
9	56	11.5	5	18.60	0.40	0.25	-	-0.59663
9	56	12.5	6	18.53	0.33	0.21	-	-0.67607
9	56	13.5	7	18.51	0.31	0.20	-	-0.70712
9	56	14.5	8	18.56	0.36	0.23	-	-0.64035
9	56	20.5	14	18.64	0.44	0.28	-	-0.55645
9	56	21.5	15	18.42	0.22	0.14	-	-0.85203
9	56	22.5	16	18.70	0.50	0.32	-	-0.50148
9	56	23.5	17	18.43	0.23	0.15	-	-0.83251
9	56	24.5	18	18.21	0.01	0.01	-	-2.27842
9	56	25.5	19	18.07	-0.13	-0.08		ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2S

DATE= 11/08/90

CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 10.0 FEET
 INITIAL WATER ABOVE TRANS.= 18.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD HEAD RATIO	LOG HEAD RATIO
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)			
9	55	0	0	18.60	0.40	1.00	0	
9	55	2	2	18.62	0.42	1.00	0	
9	55	4	4	18.61	0.41	1.02	0.010365	
9	55	6	6	18.62	0.42	1.04	0.017380	
9	55	8	8	18.61	0.41	1.01	0.005706	
9	55	10	10	18.61	0.41	1.03	0.011825	
9	55	12	12	18.60	0.40	1.00	0.000499	
9	55	14	14	18.62	0.42	1.06	0.023575	
9	55	16	16	18.61	0.41	1.03	0.013039	
9	55	18	18	18.61	0.41	1.01	0.004719	
9	55	20	20	18.61	0.41	1.03	0.012797	
9	55	22	22	18.62	0.42	1.04	0.018339	
9	55	24	24	18.61	0.41	1.03	0.013766	
9	55	26	26	18.60	0.40	1.00	0.000748	
9	55	28	28	18.62	0.42	1.04	0.015697	
9	55	30	30	18.60	0.40	1.00	0.001993	
9	55	32	32	18.62	0.42	1.03	0.014732	
9	55	34	34	18.61	0.41	1.01	0.006199	
9	55	36	36	18.62	0.42	1.05	0.019295	
9	55	38	38	18.61	0.41	1.03	0.013281	
9	55	51.5	51.5	18.61	0.41	1.02	0.007183	
9	55	52.5	52.5	18.46	0.26	0.65	-0.18455	
9	55	53.5	53.5	18.69	0.49	1.23	0.090324	
9	55	54.5	54.5	18.69	0.49	1.23	0.089308	
9	55	55.5	55.5	18.57	0.37	0.92	-0.03836	
9	55	56.5	56.5	18.61	0.41	1.03	0.013766	
9	56	2.5	62.5	18.65	0.45	1.12	0.049739	
9	56	3.5	63.5	18.49	0.29	0.72	-0.14236	
9	56	4.5	64.5	18.72	0.52	1.29	0.109374	
9	56	5.5	65.5	18.98	0.78	1.94	0.288378	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2S

DATE= 11/08/90
 Casing Diameter= 2 INCHES
 Sand Diameter= 6 INCHES
 Open Interval= 10.0 FEET
 Initial Water Above Trans.= 18.2 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO	
RISING HEAD TEST							
9	56	28.5	0	18.85	0.65	1.00	0
9	56	29.5	1	18.75	0.55	0.84	-0.07789
9	56	30.5	2	18.73	0.53	0.82	-0.08850
9	56	31.5	3	18.60	0.40	0.61	-0.21743
9	56	32.5	4	18.52	0.32	0.50	-0.30351
9	56	33.5	5	18.63	0.43	0.66	-0.17911
9	56	34.5	6	18.73	0.53	0.81	-0.08888
9	56	35.5	7	18.44	0.24	0.36	-0.44048
9	56	36.5	8	18.53	0.33	0.51	-0.29283
9	56	37.5	9	18.50	0.30	0.45	-0.34297
9	56	38.5	10	18.68	0.48	0.74	-0.13082
9	56	39.5	11	18.66	0.46	0.71	-0.15145
9	56	40.5	12	18.60	0.40	0.62	-0.20839
9	56	41.5	13	18.50	0.30	0.47	-0.33227
9	56	42.5	14	17.93	-0.27	-0.42	ERR
9	56	43.5	15	18.12	-0.08	-0.12	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2S

DATE= 11/08/90
CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES
OPEN INTERVAL= 10.0 FEET
INITIAL WATER ABOVE TRANS.= 18.2 FEET

24-HR CLOCK TIME	HOURS	MINUTES	SECONDS	WATER			LOG HEAD RATIO
				ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)	

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 4.77E-02 CM/SEC FALLING HEAD*

K= 6.52E-03 CM/SEC RISING HEAD**

P-2B (TW-2D)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2D

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 15.98 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		

FALLING HEAD TEST

10	4	45	0	18.103	2.12	1.00	0.00	0.33
10	4	46	1	17.248	1.27	0.60	-0.22	0.10
10	4	47	2	17.004	1.02	0.48	-0.32	0.01
10	4	48	3	16.738	0.76	0.36	-0.45	-0.12
10	4	49	4	16.801	0.82	0.39	-0.41	-0.09
10	4	50	5	16.625	0.64	0.30	-0.52	-0.19
10	4	51	6	16.727	0.75	0.35	-0.45	-0.13
10	4	52	7	16.605	0.63	0.29	-0.53	-0.20
10	4	53	8	16.651	0.67	0.32	-0.50	-0.17
10	4	54	9	16.454	0.47	0.22	-0.65	-0.32
10	4	55	10	16.623	0.64	0.30	-0.52	-0.19
10	4	56	11	16.573	0.59	0.28	-0.55	-0.23
10	4	57	12	16.368	0.39	0.18	-0.74	-0.41
10	4	58	13	16.577	0.60	0.28	-0.55	-0.22
10	4	59	14	16.269	0.29	0.14	-0.87	-0.54
10	5	0	15	16.523	0.54	0.26	-0.59	-0.27
10	5	1	16	16.462	0.48	0.23	-0.64	-0.32
10	5	2	17	16.442	0.46	0.22	-0.66	-0.34
10	5	3	18	16.411	0.43	0.20	-0.69	-0.37
10	5	4	19	16.126	0.15	0.07	-1.16	-0.84
10	5	5	20	16.275	0.29	0.14	-0.86	-0.53
10	5	6	21	16.158	0.18	0.08	-1.08	-0.75
10	5	7	22	16.242	0.26	0.12	-0.91	-0.58
10	5	8	23	16.368	0.39	0.18	-0.74	-0.41
10	5	9	24	16.042	0.06	0.03	-1.53	-1.21
10	5	10	25	16.275	0.29	0.14	-0.86	-0.53
10	5	11	26	16.026	0.05	0.02	-1.66	-1.33
10	5	12	27	16.026	0.05	0.02	-1.66	-1.34
10	5	13	28	16.228	0.25	0.12	-0.93	-0.60
10	5	14	29	15.940	-0.04	-0.02	ERR	ERR
10	5	15	30	16.173	0.19	0.09	-1.04	-0.72
10	5	16	31	16.037	0.06	0.03	-1.57	-1.24
10	5	17	32	15.908	-0.07	-0.03	ERR	ERR
10	5	18	33	15.996	0.02	0.01	-2.13	-1.80

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2D

DATE= 11/08/90

CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 15.98 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO			
10	5	19	34	15.924	-0.06	-0.03	ERR	ERR
10	5	20	35	16.205	0.22	0.11	-0.97	-0.65
10	5	21	36	16.246	0.27	0.13	-0.90	-0.57
10	5	22	37	16.114	0.13	0.06	-1.20	-0.87
10	5	23	38	15.985	0.01	0.00	-2.61	-2.28
10	5	24	39	16.150	0.17	0.08	-1.10	-0.77
10	5	25	40	15.793	-0.19	-0.09	ERR	ERR
10	5	26	41	15.853	-0.13	-0.06	ERR	ERR
10	5	27	42	16.030	0.05	0.02	-1.63	-1.31
10	5	28	43	16.138	0.16	0.07	-1.13	-0.80
10	5	29	44	15.950	-0.03	-0.01	ERR	ERR
10	5	30	45	15.805	-0.18	-0.08	ERR	ERR
10	5	31	46	15.930	-0.05	-0.02	ERR	ERR
10	5	32	47	16.116	0.14	0.06	-1.19	-0.87
10	5	33	48	15.851	-0.13	-0.06	ERR	ERR
10	5	34	49	15.793	-0.19	-0.09	ERR	ERR
10	5	35	50	15.855	-0.12	-0.06	ERR	ERR
10	5	36	51	16.055	0.07	0.04	-1.45	-1.13
10	5	37	52	15.912	-0.07	-0.03	ERR	ERR
10	5	38	53	16.091	0.11	0.05	-1.28	-0.96
10	5	39	54	15.855	-0.12	-0.06	ERR	ERR
10	5	40	55	16.042	0.06	0.03	-1.53	-1.21
10	5	41	56	15.799	-0.18	-0.09	ERR	ERR
10	5	42	57	15.857	-0.12	-0.06	ERR	ERR
10	5	43	58	15.757	-0.22	-0.10	ERR	ERR
10	5	44	59	15.940	-0.04	-0.02	ERR	ERR
10	5	45	60	15.947	-0.03	-0.02	ERR	ERR
10	5	46	61	15.999	0.02	0.01	-2.05	-1.72
10	5	47	62	16.068	0.09	0.04	-1.38	-1.05
10	5	48	63	15.887	-0.09	-0.04	ERR	ERR
10	5	49	64	15.812	-0.17	-0.08	ERR	ERR
10	5	50	65	15.999	0.02	0.01	-2.05	-1.72
10	5	51	66	15.765	-0.21	-0.10	ERR	ERR
10	5	52	67	15.684	-0.30	-0.14	ERR	ERR
10	5	53	68	15.852	-0.13	-0.06	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2D

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 15.98 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
10	5	54	69	15.887	-0.09	-0.04	ERR	ERR
10	5	55	70	15.826	-0.15	-0.07	ERR	ERR
10	5	56	71	15.661	-0.32	-0.15	ERR	ERR
10	5	57	72	15.808	-0.17	-0.08	ERR	ERR
10	5	58	73	15.877	-0.10	-0.05	ERR	ERR
10	5	59	74	15.777	-0.20	-0.10	ERR	ERR
10	6	0	75	15.988	0.01	0.00	-2.45	-2.12

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2D

DATE= 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	40.0 FEET
INITIAL WATER ABOVE TRANS.=		15.98 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS. (FEET)	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
10	6	43	0	13.978	2.00	1.00	0.00	0.30
10	6	44	1	14.218	1.76	0.88 **	-0.06	0.25
10	6	45	2	14.446	1.53	0.77	-0.12	0.19
10	6	46	3	14.586	1.39	0.70	-0.16	0.14
10	6	47	4	14.679	1.30	0.65	-0.19	0.11
10	6	48	5	14.939	1.04	0.52	-0.28	0.02
10	6	49	6	14.837	1.14	0.57	-0.24	0.06
10	6	50	7	14.941	1.04	0.52	-0.28	0.02
10	6	51	8	15.057	0.92	0.46	-0.34	-0.03
10	6	52	9	14.946	1.03	0.52	-0.29	0.01
10	6	53	10	15.210	0.77	0.38	-0.42	-0.11
10	6	54	11	15.338	0.64	0.32	-0.49	-0.19
10	6	55	12	15.223	0.76	0.38	-0.42	-0.12
10	6	56	13	15.254	0.73	0.36	-0.44	-0.14
10	6	57	14	15.175	0.81	0.40	-0.40	-0.09
10	6	58	15	15.381	0.60	0.30	-0.52	-0.22
10	6	59	16	15.448	0.53	0.27 **	-0.58	-0.27
10	7	0	17	15.333	0.65	0.32	-0.49	-0.19
10	7	1	18	15.321	0.66	0.33	-0.48	-0.18
10	7	2	19	15.477	0.50	0.25	-0.60	-0.30
10	7	3	20	15.475	0.51	0.25	-0.60	-0.30
10	7	4	21	15.364	0.62	0.31	-0.51	-0.21
10	7	5	22	15.637	0.34	0.17	-0.77	-0.46
10	7	6	23	15.473	0.51	0.25	-0.60	-0.30
10	7	7	24	15.705	0.27	0.14	-0.86	-0.56
10	7	8	25	15.529	0.45	0.23	-0.65	-0.35
10	7	9	26	15.542	0.44	0.22	-0.66	-0.36
10	7	10	27	15.610	0.37	0.18	-0.73	-0.43
10	7	11	28	15.726	0.25	0.13	-0.90	-0.60
10	7	12	29	15.575	0.40	0.20	-0.69	-0.39
10	7	13	30	15.808	0.17	0.09	-1.07	-0.77
10	7	14	31	15.811	0.17	0.08	-1.07	-0.77
10	7	15	32	15.625	0.36	0.18	-0.75	-0.45
10	7	16	33	15.604	0.38	0.19	-0.73	-0.42

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2D

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 15.98 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD RATIO			
10	7	17	34	15.660	0.32	0.16	-0.80	-0.49
10	7	18	35	15.621	0.36	0.18	-0.75	-0.44
10	7	19	36	15.652	0.33	0.16	-0.79	-0.48
10	7	20	37	15.903	0.08	0.04	-1.42	-1.12
10	7	21	38	15.662	0.32	0.16	-0.80	-0.50
10	7	22	39	15.663	0.32	0.16	-0.80	-0.50
10	7	23	40	15.645	0.33	0.17	-0.78	-0.47
10	7	24	41	15.914	0.07	0.03	-1.48	-1.18
10	7	25	42	15.765	0.21	0.11	-0.97	-0.67
10	7	26	43	15.920	0.06	0.03	-1.53	-1.22
10	7	27	44	15.891	0.09	0.04	-1.35	-1.05
10	7	28	45	15.933	0.05	0.02	-1.63	-1.32
10	7	29	46	15.959	0.02	0.01	-1.99	-1.69
10	7	30	47	15.921	0.06	0.03	-1.53	-1.23
10	7	31	48	15.823	0.16	0.08	-1.11	-0.80
10	7	32	49	15.688	0.29	0.15	-0.84	-0.53
10	7	33	50	15.847	0.13	0.07	-1.18	-0.88
10	7	34	51	15.705	0.27	0.14	-0.86	-0.56
10	7	35	52	15.789	0.19	0.10	-1.02	-0.72
10	7	36	53	15.723	0.26	0.13	-0.89	-0.59

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-2D

DATE= 11/08/90

CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES
OPEN INTERVAL= 40.0 FEET
INITIAL WATER ABOVE TRANS.= 15.98 FEET

24-HR CLOCK TIME	ELAPSED TIME	WATER			LOG HEAD RATIO	LOG HEAD		
		HOURS	MINUTES	SECONDS			(SEC)	TRANS.
-----	-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 7.27E-04 CM/SEC FALLING HEAD*

K= 1.07E-03 CM/SEC RISING HEAD**

P-3A (TW-3S)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-3S

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 10 FEET
 INITIAL WATER ABOVE TRANS.= 15.77 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		
FALLING HEAD TEST								
9	7	42	0	18.187	2.42	1.00	0.00	0.38
9	7	44	2	16.253	0.48	0.20	-0.70	-0.32
9	7	46	4	15.958	0.19	0.08	-1.11	-0.73
9	7	48	6	15.852	0.08	0.03	-1.47	-1.09
9	7	50	8	15.787	0.02	0.01	-2.16	-1.77
9	7	52	10	15.777	0.01	0.00	-2.52	-2.14
9	7	54	12	15.773	0.00	0.00	-2.91	-2.53
9	7	56	14	15.822	0.05	0.02	-1.66	-1.28

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-3S

DATE= 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	10 FEET
INITIAL WATER ABOVE TRANS.=		15.77 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
RISING HEAD TEST									
9	9	16	0	14.333	1.44	1.00	**	0.00	0.16
9	9	18	2	15.314	0.46	0.32		-0.50	-0.34
9	9	20	4	15.575	0.19	0.14		-0.87	-0.71
9	9	22	6	15.660	0.11	0.08	**	-1.12	-0.96
9	9	24	8	15.687	0.08	0.06		-1.24	-1.08
9	9	26	10	15.711	0.06	0.04		-1.39	-1.23
9	9	28	12	15.719	0.05	0.04		-1.45	-1.29
9	9	30	14	15.724	0.05	0.03		-1.50	-1.34
9	9	32	16	15.737	0.03	0.02		-1.64	-1.48
9	9	34	18	15.735	0.04	0.02		-1.61	-1.45
9	9	36	20	15.748	0.02	0.02		-1.81	-1.65
9	9	38	22	15.748	0.02	0.02		-1.82	-1.66
9	9	40	24	15.749	0.02	0.01		-1.84	-1.69
9	9	42	26	15.760	0.01	0.01		-2.14	-1.99
9	9	44	28	15.747	0.02	0.02		-1.80	-1.65
9	9	46	30	15.754	0.02	0.01		-1.94	-1.79
9	9	48	32	15.765	0.01	0.00		-2.44	-2.29
9	9	50	34	15.766	0.00	0.00		-2.54	-2.39
9	9	52	36	15.763	0.01	0.00		-2.33	-2.18
9	9	54	38	15.763	0.01	0.00		-2.31	-2.15
9	9	56	40	15.768	0.00	0.00		-2.78	-2.62
9	9	58	42	15.767	0.00	0.00		-2.65	-2.49

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-3S

DATE= 11/08/90
CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES
OPEN INTERVAL= 10 FEET
INITIAL WATER ABOVE TRANS.= 15.77 FEET

24-HR CLOCK TIME			WATER			LOG		
HOURS	MINUTES	SECONDS	ELAPSED TIME	ABOVE TRANS.	HEAD (FEET)	HEAD (FEET)	RATIO	HEAD
-----	-----	-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 2.27E-02 CM/SEC FALLING HEAD*

K= 1.67E-02 CM/SEC RISING HEAD**

P-3B (TW-3D)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-3D

DATE= 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	10 FEET
INITIAL WATER ABOVE TRANS.=		15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		HEAD (FEET)	HEAD (FEET)	RATIO		
FALLING HEAD TEST								
9	38	12	0	16.970	1.07	1.00	0.00	0.03
9	38	14	2	16.598	0.70	0.65	-0.19	-0.16
9	38	16	4	16.617	0.72	0.67	-0.17	-0.14
9	38	18	6	16.223	0.32	0.30	-0.52	-0.49
9	38	20	8	16.130	0.23	0.22	-0.67	-0.64
9	38	22	10	16.003	0.10	0.10	-1.02	-0.99
9	38	24	12	16.017	0.12	0.11	-0.96	-0.93
9	38	26	14	15.951	0.05	0.05	-1.32	-1.30
9	38	28	16	15.925	0.03	0.02	-1.63	-1.60
9	38	30	18	15.988	0.09	0.08	-1.08	-1.06

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-3D

DATE= 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	10 FEET
INITIAL WATER ABOVE TRANS.=		15.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	RATIO			
RISING HEAD TEST									
9	40	34	0	14.115	1.79	1.00	**	0.00	0.25
9	40	36	2	14.796	1.10	0.62	-0.21	0.04	
9	40	38	4	15.296	0.60	0.34	-0.47	-0.22	
9	40	40	6	15.532	0.37	0.21	-0.69	-0.43	
9	40	42	8	15.741	0.16	0.09	-1.05	-0.80	
9	40	44	10	15.780	0.12	0.07	-1.17	-0.92	
9	40	46	12	15.819	0.08	0.05	-1.34	-1.09	
9	40	48	14	15.864	0.04	0.02	-1.69	-1.44	
9	40	50	16	15.874	0.03	0.01	-1.84	-1.59	
9	40	52	18	15.887	0.01	0.01	-2.14	-1.89	
9	40	54	20	15.891	0.01	0.01	**	-2.28	-2.03
9	40	56	22	15.940	-0.04	-0.02	ERR	ERR	
9	40	58	24	15.904	-0.00	-0.00	ERR	ERR	
9	41	0	26	15.899	0.00	0.00	-3.21	-2.95	
9	41	2	28	15.898	0.00	0.00	-3.06	-2.80	

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-3D

DATE= 11/08/90

CASING DIAMETER= 2 INCHES

SAND DIAMETER= 6 INCHES

OPEN INTERVAL= 10 FEET

INITIAL WATER ABOVE TRANS.= 15.9 FEET

24-HR CLOCK TIME HOURS	MINUTES	SECONDS	WATER			LOG HEAD RATIO	LOG HEAD
			ELAPSED TIME (SEC)	ABOVE TRANS. (FEET)	HEAD (FEET)		

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 1.09E-02 CM/SEC FALLING HEAD*

K= 1.02E-02 CM/SEC RISING HEAD**

P-4A (TW-4 S)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-4S

DATE- 11/08/90
 CASING DIAMETER- 2 INCHES
 SAND DIAMETER- 6 INCHES
 OPEN INTERVAL- 10 FEET
 INITIAL WATER ABOVE TRANS.- 15.68 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			HEAD RATIO	LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO			
FALLING HEAD TEST									
11	9	28	0	16.002	0.32	1.00 *	0	-0.49269	
11	9	29	1	15.774	0.09	0.29	-0.53299	-1.02568	
11	9	30	2	15.705	0.02	0.08	-1.11716	-1.60985	
11	9	31	3	15.695	0.01	0.05	-1.34204	-1.83473	
11	9	32	4	15.684	0.00	0.01 *	-1.95678	-2.44947	

NOTES:

- 1) *indicates that best fit line passes through these points
- 2) all depths measured from top of casing

K= 4.40E-02 CM/SEC FALLING HEAD*

P-4B (TW-4D)

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-4D

DATE= 11/08/90

CASING DIAMETER= 2 INCHES

SAND DIAMETER= 6 INCHES

OPEN INTERVAL= 10.0 FEET

INITIAL WATER ABOVE TRANS.= 14.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	HEAD RATIO		

FALLING HEAD TEST

11	27	31	0	16.368	1.47	1.00	0	0.166688
11	27	32	1	15.919	1.02	0.69	-0.15833	0.008357
11	27	33	2	15.040	0.14	0.10	-1.01959	-0.85290
11	27	34	3	14.928	0.03	0.02	-1.72087	-1.55419
11	27	35	4	14.830	-0.07	-0.05	ERR	ERR
11	27	36	5	14.916	0.02	0.01	-1.96497	-1.79828
11	27	37	6	14.998	0.10	0.07	-1.17717	-1.01048

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-4D

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 10.0 FEET
 INITIAL WATER ABOVE TRANS.= 14.9 FEET

24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER			LOG HEAD RATIO	LOG HEAD
HOURS	MINUTES	SECONDS		ABOVE TRANS.	HEAD (FEET)	HEAD RATIO		
RISING HEAD TEST								
11	28	34	0	13.971	0.93	1.00 **	0	-0.03199
11	28	35	1	14.384	0.52	0.56	-0.25528	-0.28728
11	28	36	2	14.876	0.02	0.03 **	-1.59168	-1.62367
11	28	37	3	15.568	-0.67	-0.72	ERR	ERR
11	28	38	4	15.300	-0.40	-0.43	ERR	ERR
11	28	39	5	15.229	-0.33	-0.35	ERR	ERR
11	28	40	6	15.242	-0.34	-0.37	ERR	ERR
11	28	41	7	15.042	-0.14	-0.15	ERR	ERR
11	28	42	8	15.345	-0.44	-0.48	ERR	ERR

DECEMBER 1990

893-6255

VARIABLE HEAD TEST

WELL NO. TW-4D

DATE= 11/08/90
CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES
OPEN INTERVAL= 10.0 FEET
INITIAL WATER ABOVE TRANS.= 14.9 FEET

24-HR CLOCK TIME	ELAPSED TIME (SEC)	WATER ABOVE TRANS.			LOG HEAD RATIO	LOG HEAD
		HOURS	MINUTES	SECONDS		
-----	-----	-----	-----	-----	-----	-----

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 5.16E-02 CM/SEC FALLING HEAD*

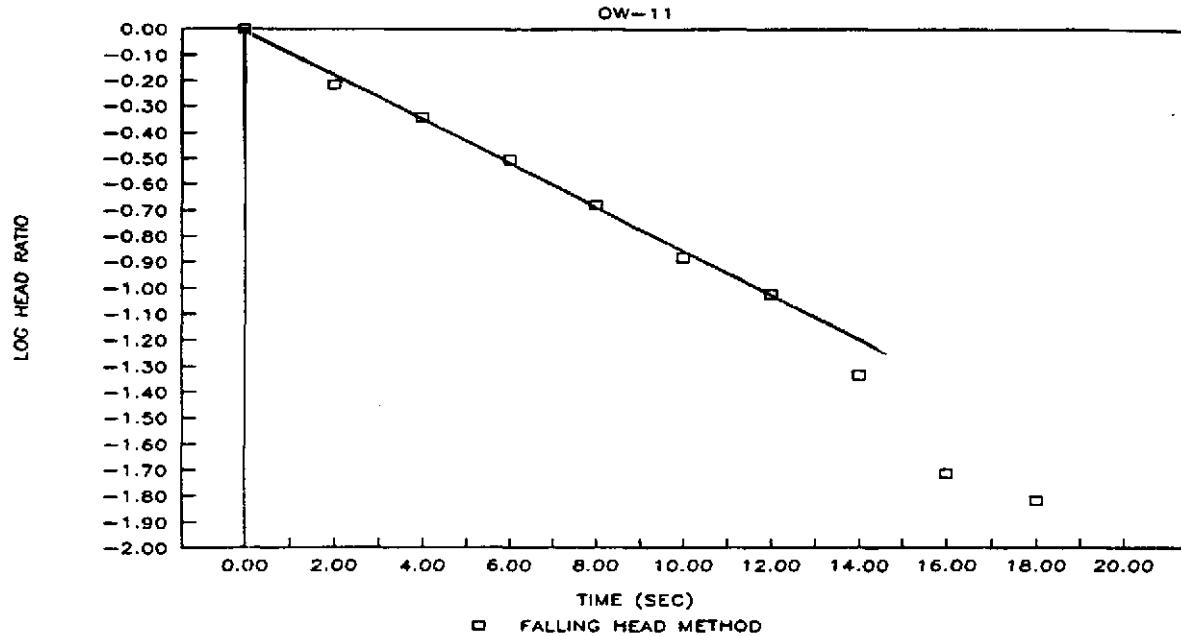
K= 7.15E-02 CM/SEC RISING HEAD**

Appendix D

**Graphical Details for Hvorslev
Method Analysis**

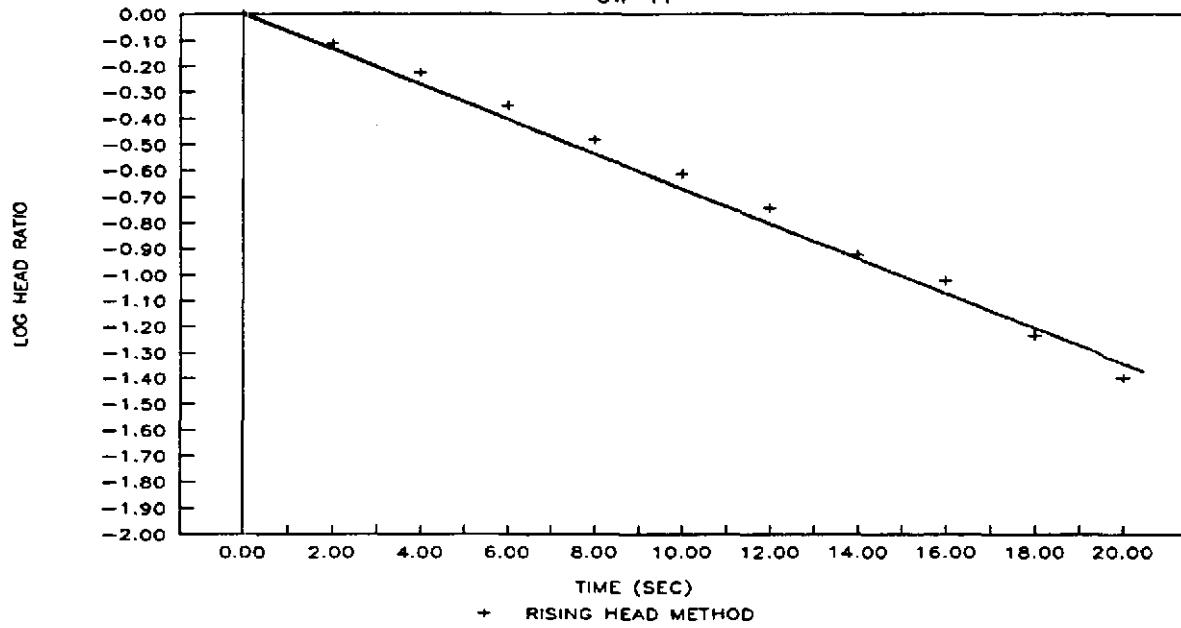
VARIABLE HEAD TEST

OW-11



VARIABLE HEAD TEST

OW-11

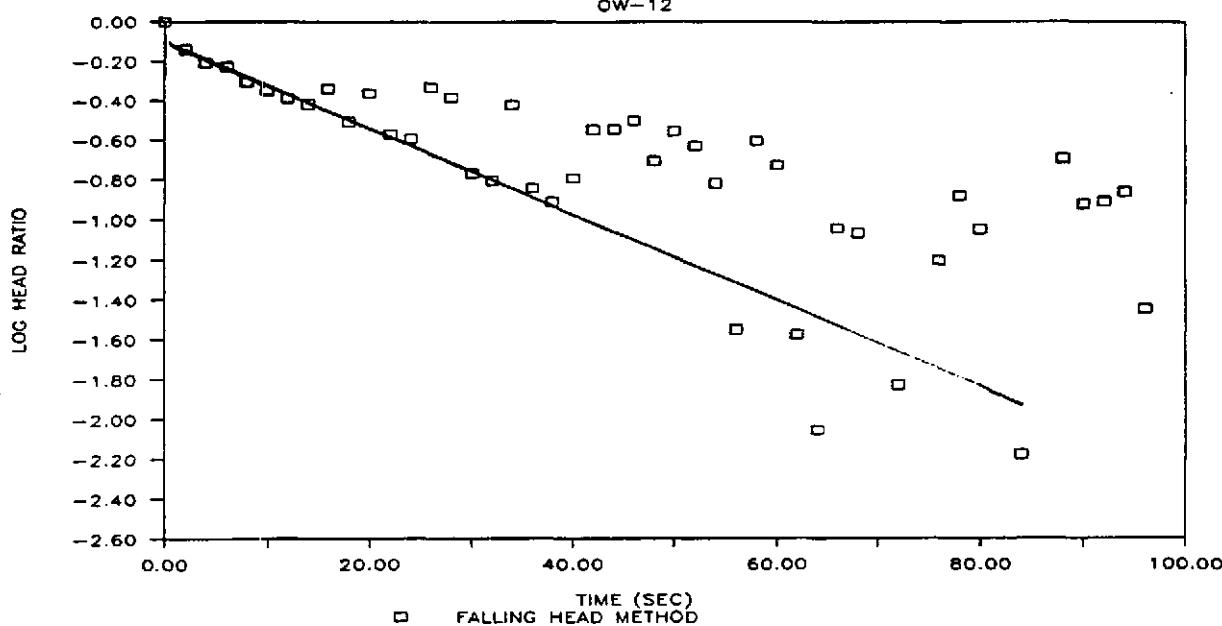


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No.:	MA01-296

WELL OW-11
HVORSLEV ANALYSIS

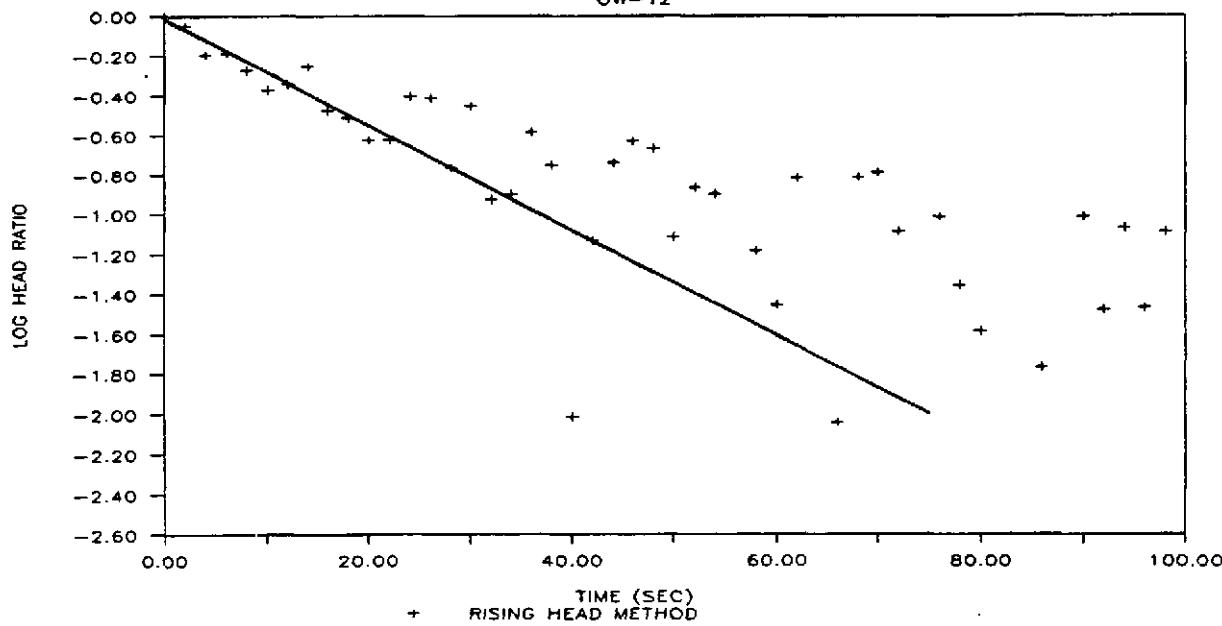
VARIABLE HEAD TEST

OW-12



VARIABLE HEAD TEST

OW-12



JOB No.: 893-6255 SCALE: AS SHOWN

DRAWN: FG DATE: 11/21/90

CHECKED: VB DWG. No.: MA01-297

WELL OW-12

HVORSLEV ANALYSIS

Golder Associates

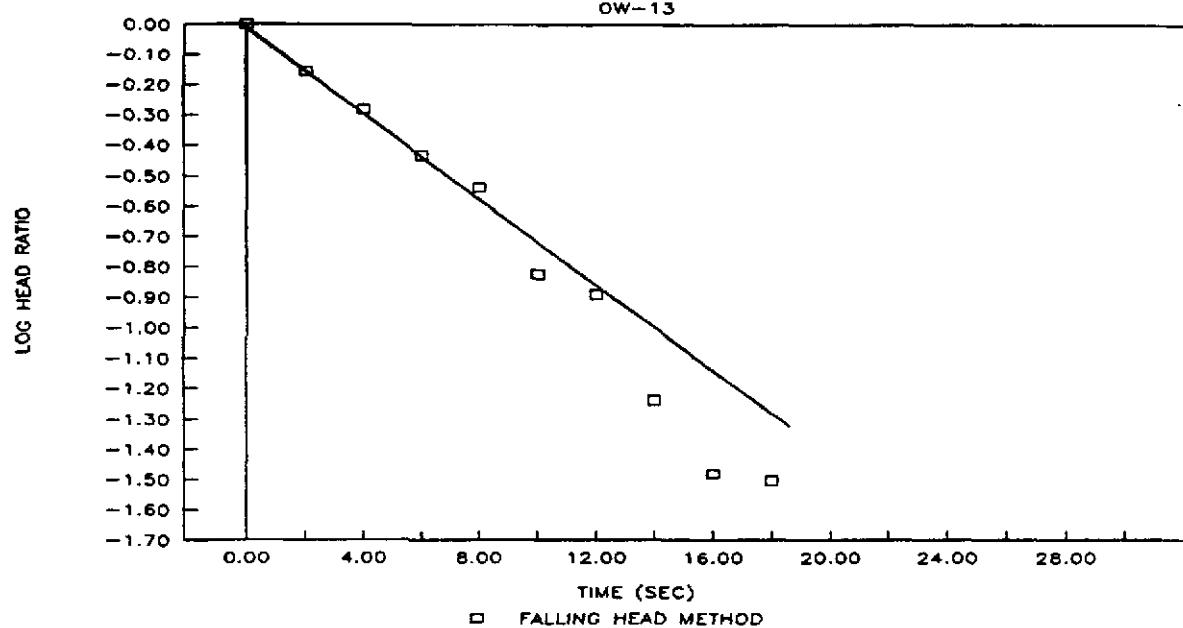
INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE

D2

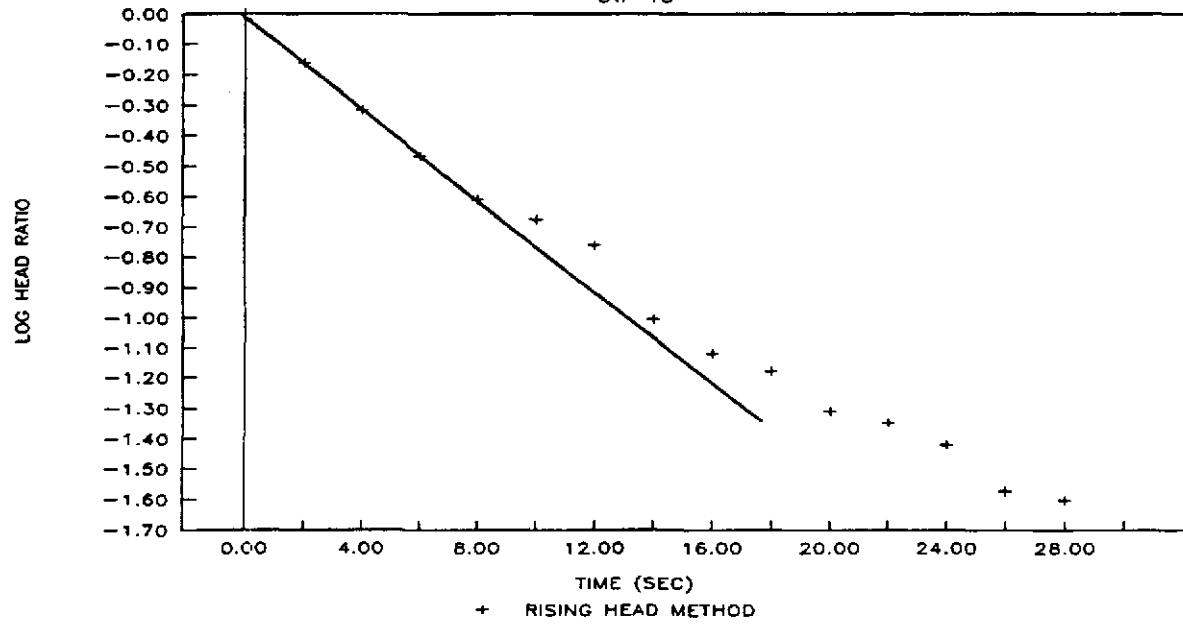
VARIABLE HEAD TEST

OW-13



VARIABLE HEAD TEST

OW-13



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

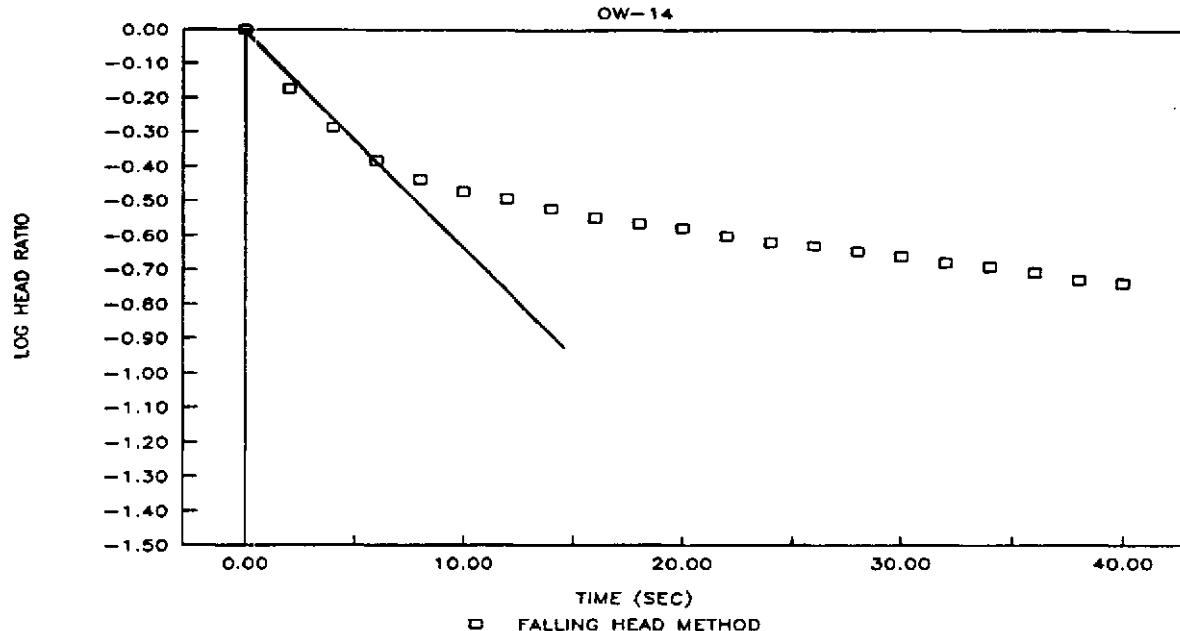
DWG. No.: MA01-298

WELL OW-13

HVORSLEV ANALYSIS

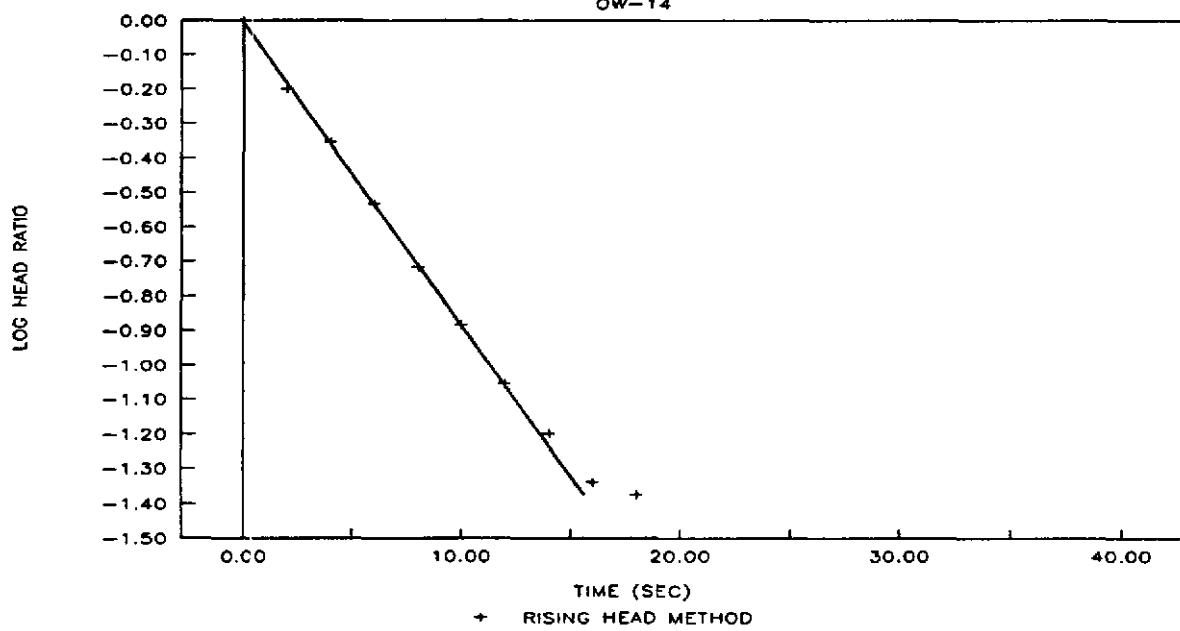
VARIABLE HEAD TEST

OW-14



VARIABLE HEAD TEST

OW-14



JOB NO:

893-6255

SCALE:

AS SHOWN

DRAWN:

FG

DATE:

11/21/90

CHECKED:

VB

DWG. NO.:

MA01-299

WELL OW-14

HVORSLEV ANALYSIS

158698

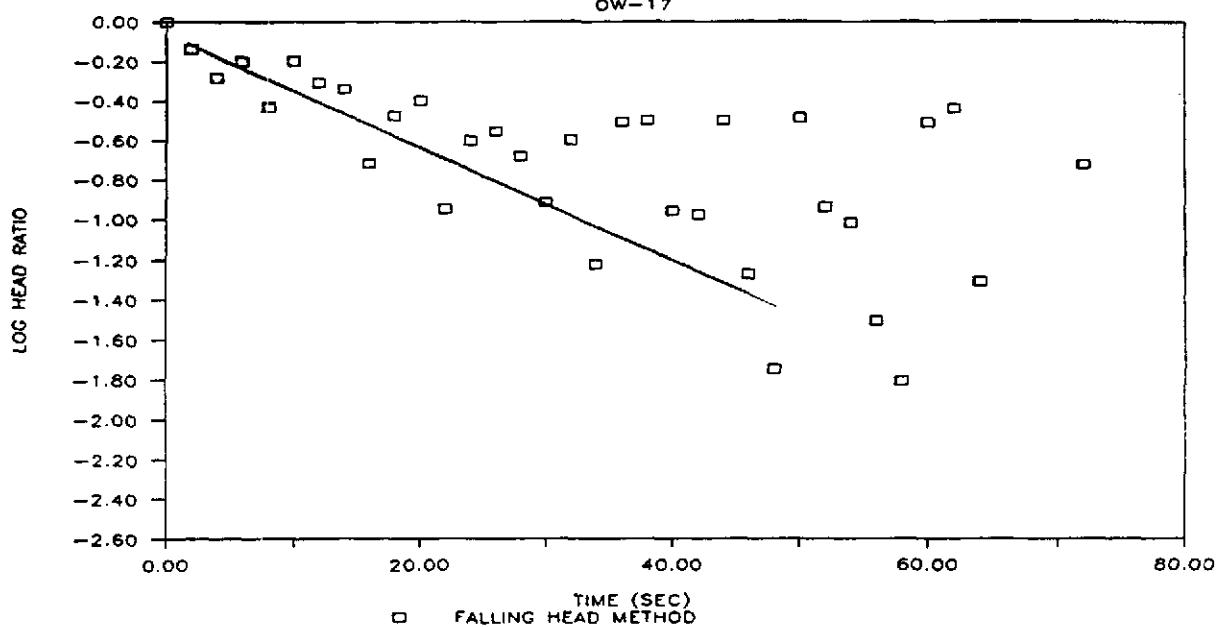
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE D4

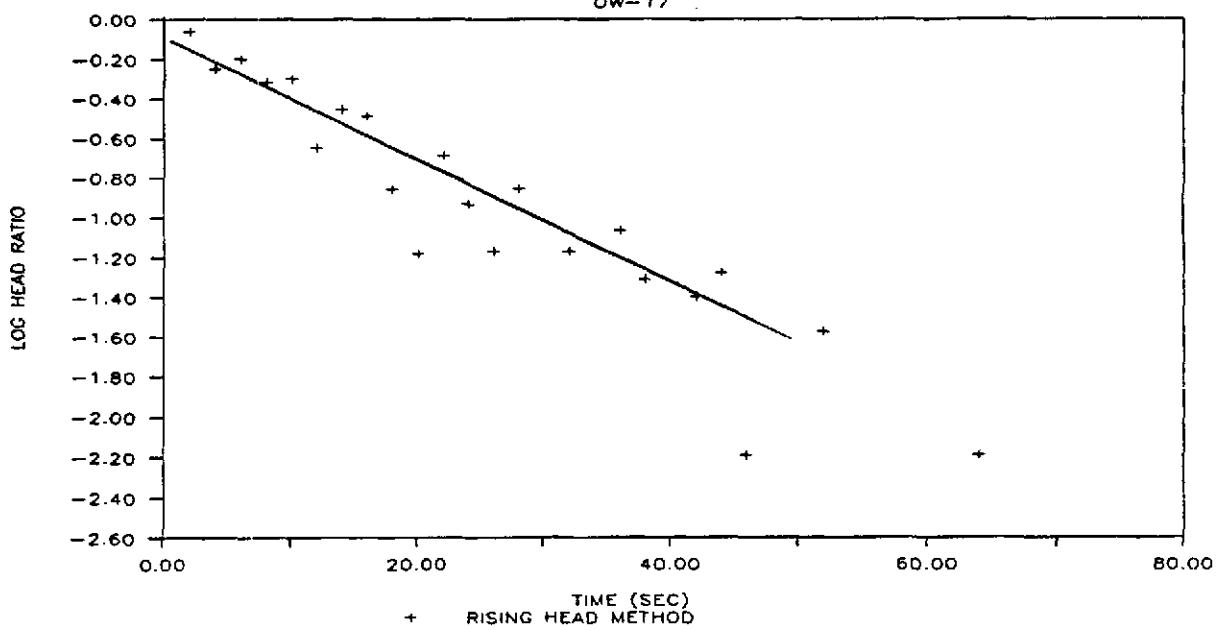
VARIABLE HEAD TEST

OW-17



VARIABLE HEAD TEST

OW-17



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN:

FG

DATE: 11/21/90

CHECKED:

VB

DRW. No.: MA01-300

WELL OW-17

HVORSLEV ANALYSIS

Golder Associates

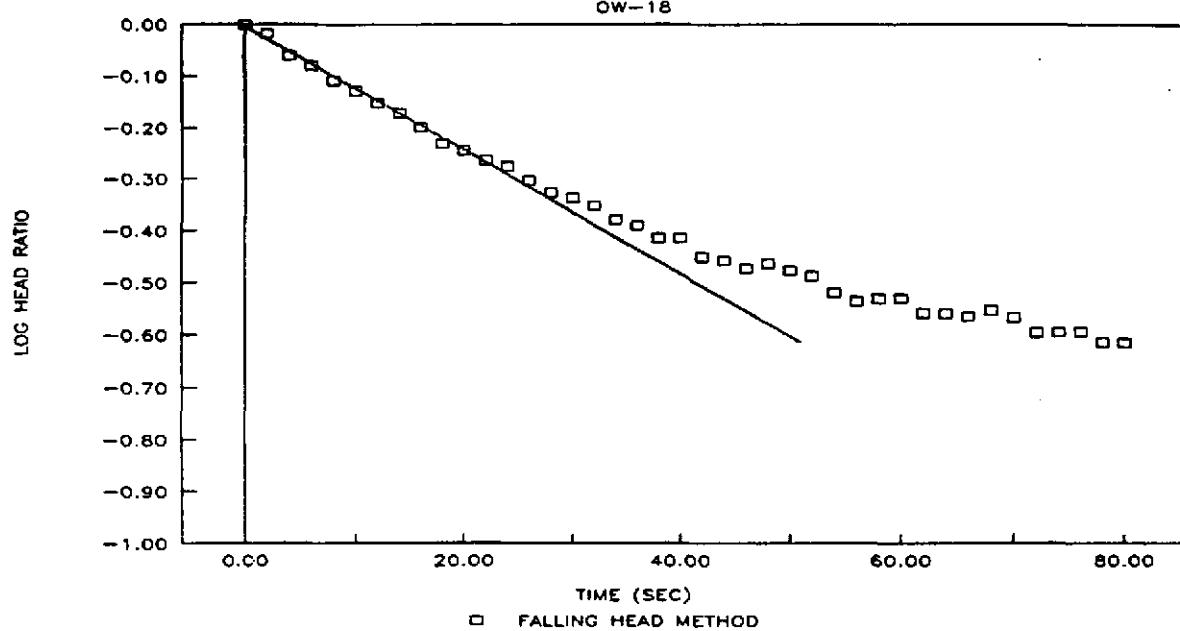
INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE:

D5

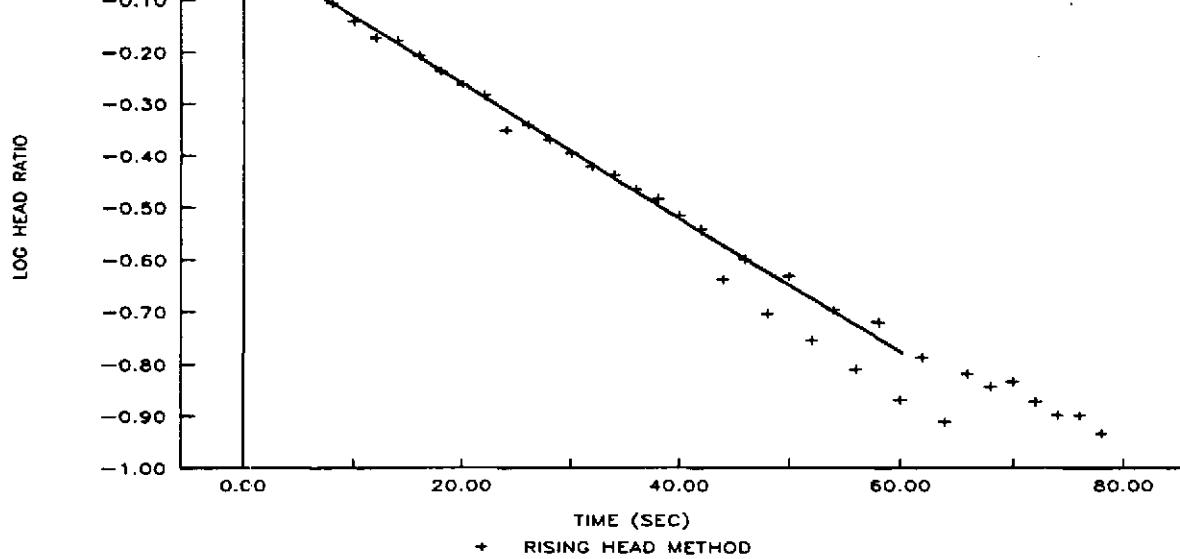
VARIABLE HEAD TEST

OW-18



VARIABLE HEAD TEST

OW-18



JOB NO.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

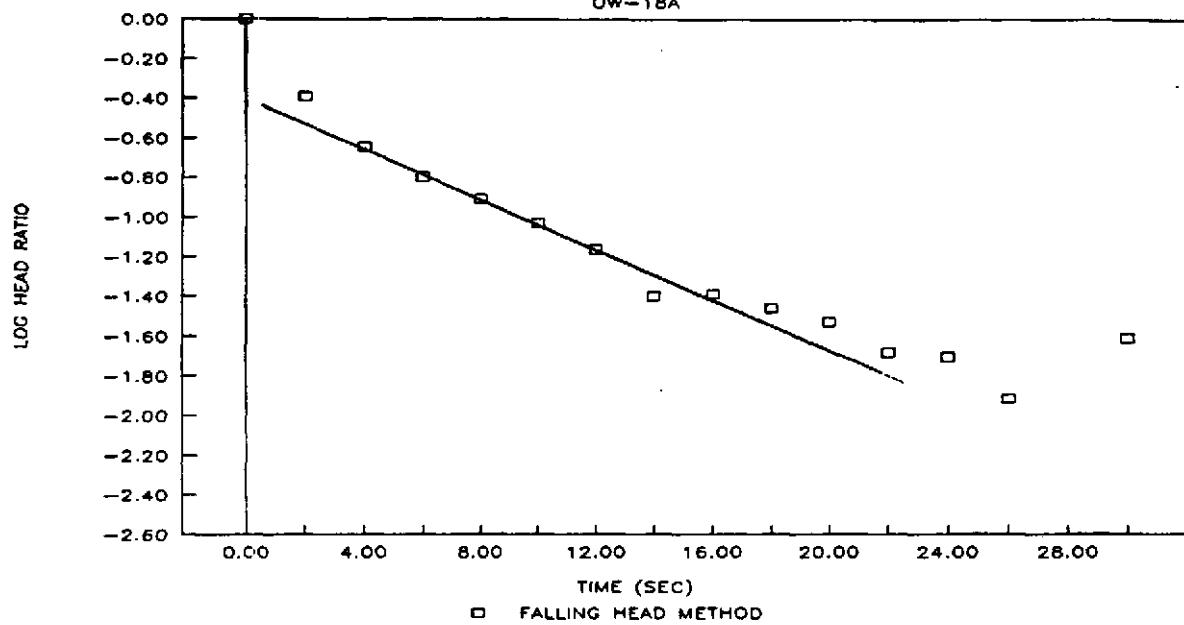
DWG. NO.: MA01-301

WELL OW-18

HVORSLEV ANALYSIS

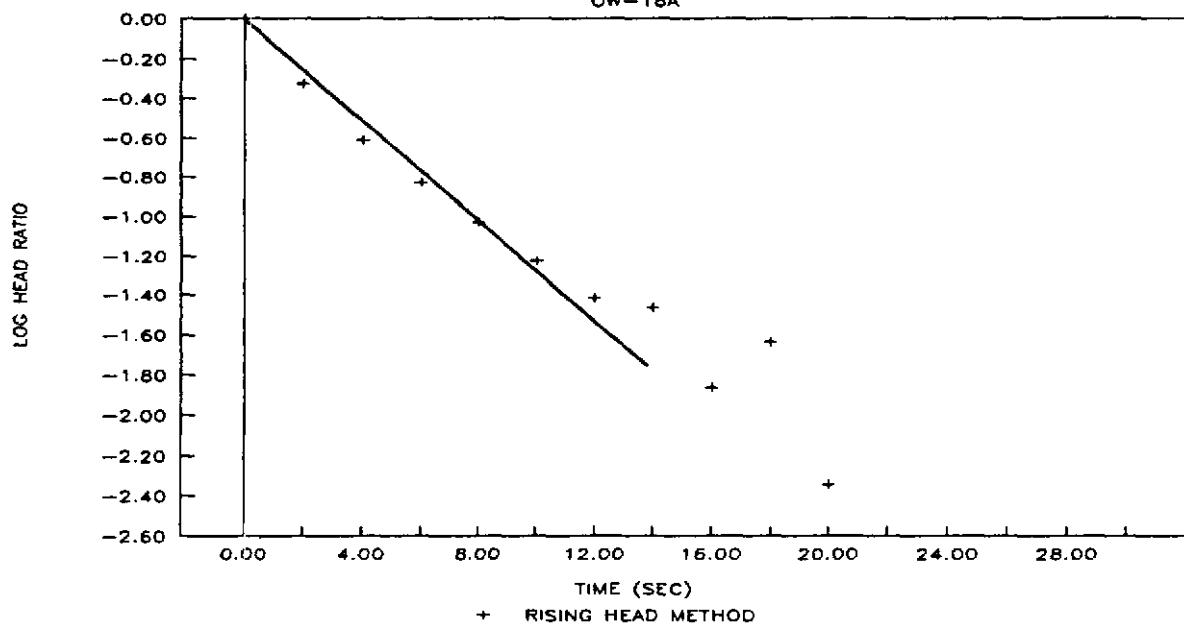
VARIABLE HEAD TEST

OW-18A



VARIABLE HEAD TEST

OW-18A



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

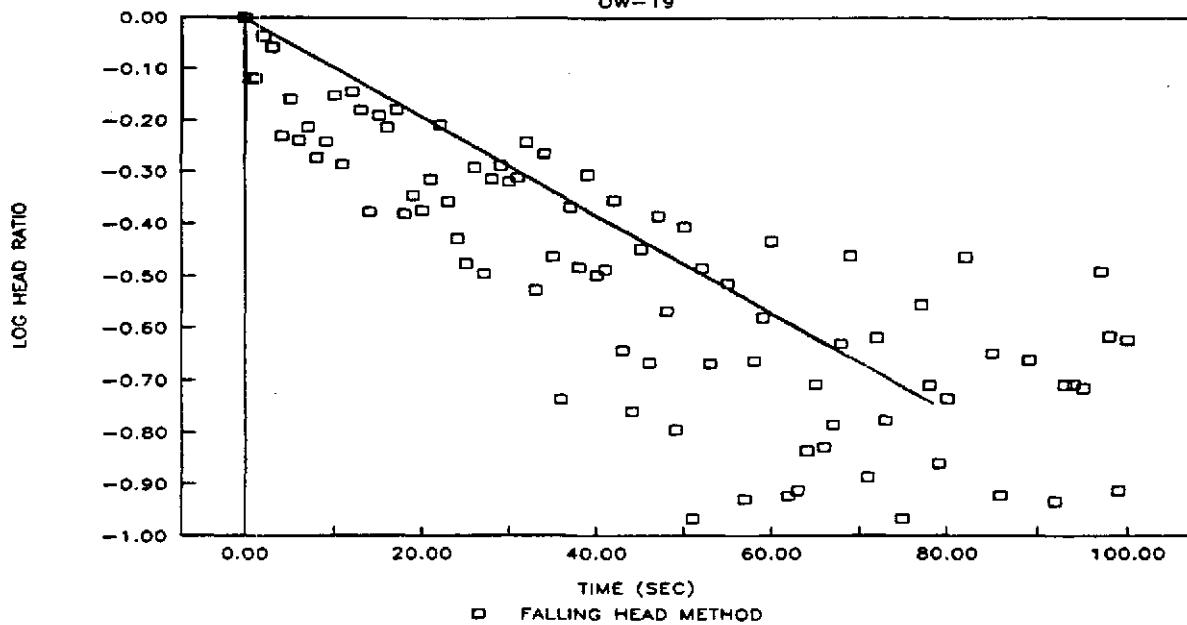
DWG. NO.: MA01-302

WELL OW-18A

HVORSLEV ANALYSIS

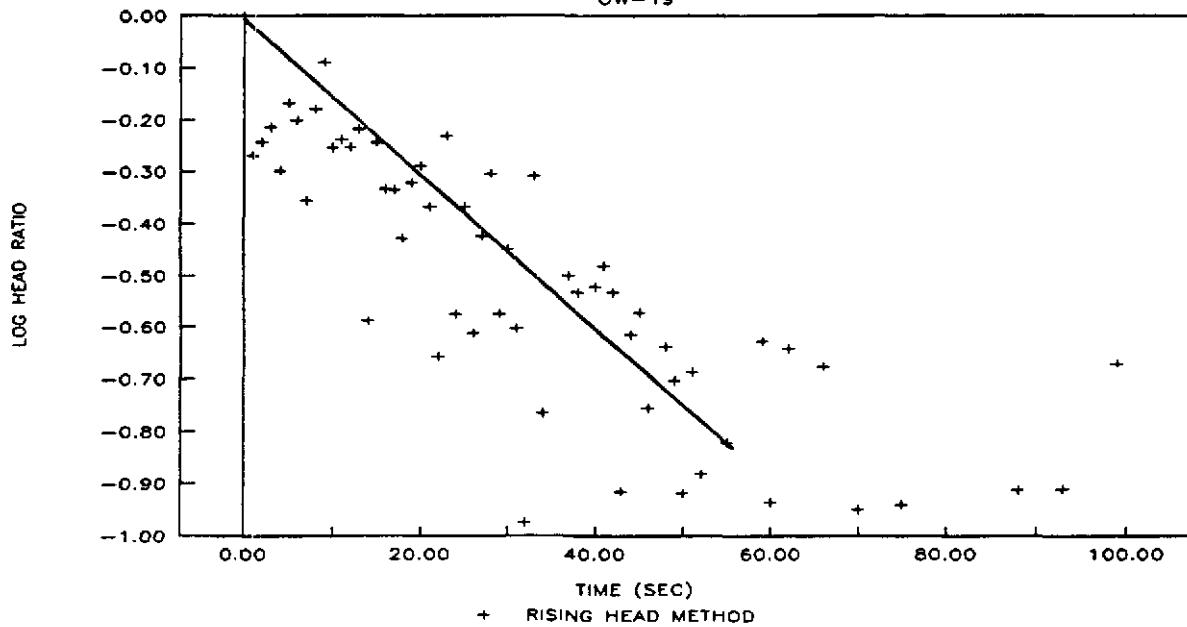
VARIABLE HEAD TEST

OW-19



VARIABLE HEAD TEST

OW-19



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN:

FG

DATE: 11/21/90

CHECKED:

VB

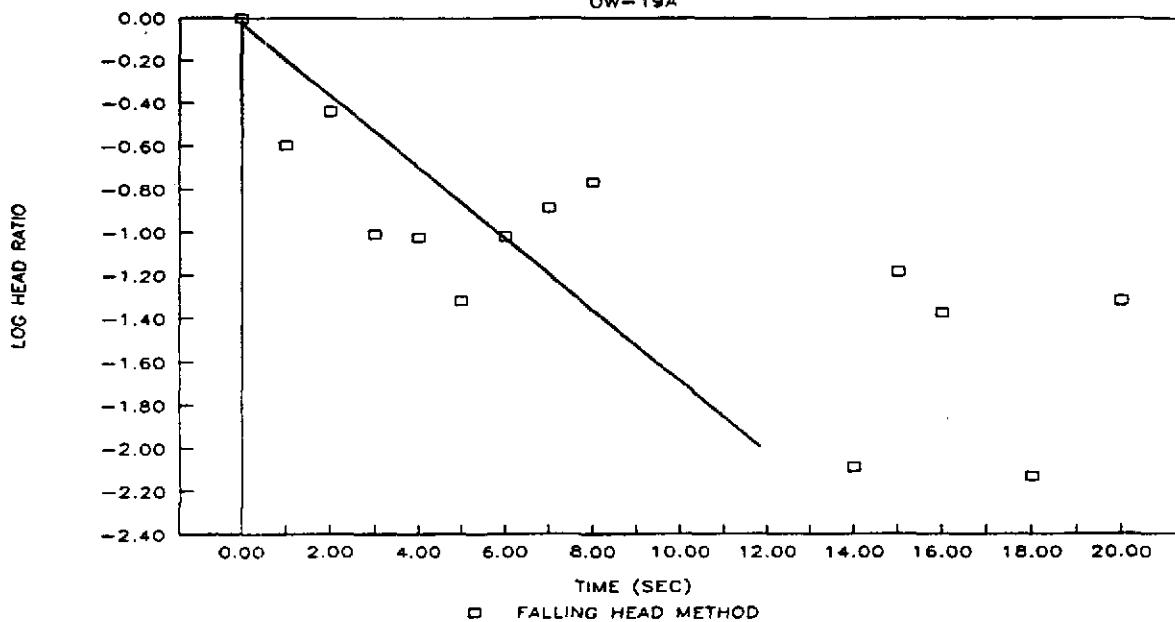
DWG. No.: MA01-303

WELL OW-19

HVORSLEV ANALYSIS

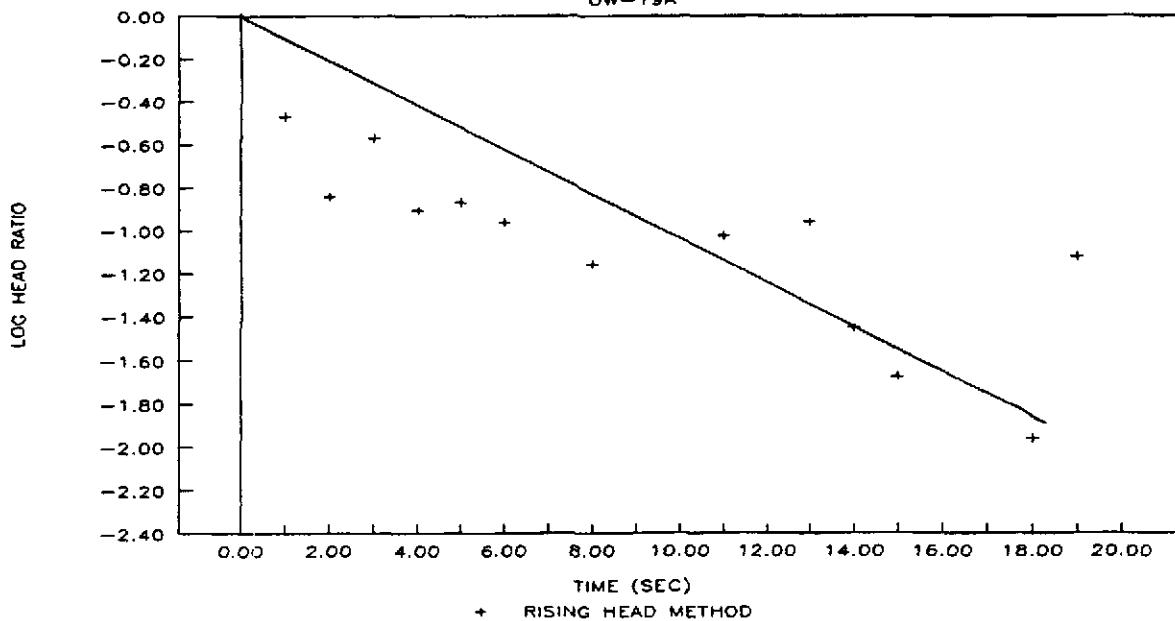
VARIABLE HEAD TEST

OW-19A



VARIABLE HEAD TEST

OW-19A



JOB No.: 893-6255 SCALE: AS SHOWN

DRAWN: FG DATE: 11/21/90

CHECKED: VB DWG. No.: MA01-304

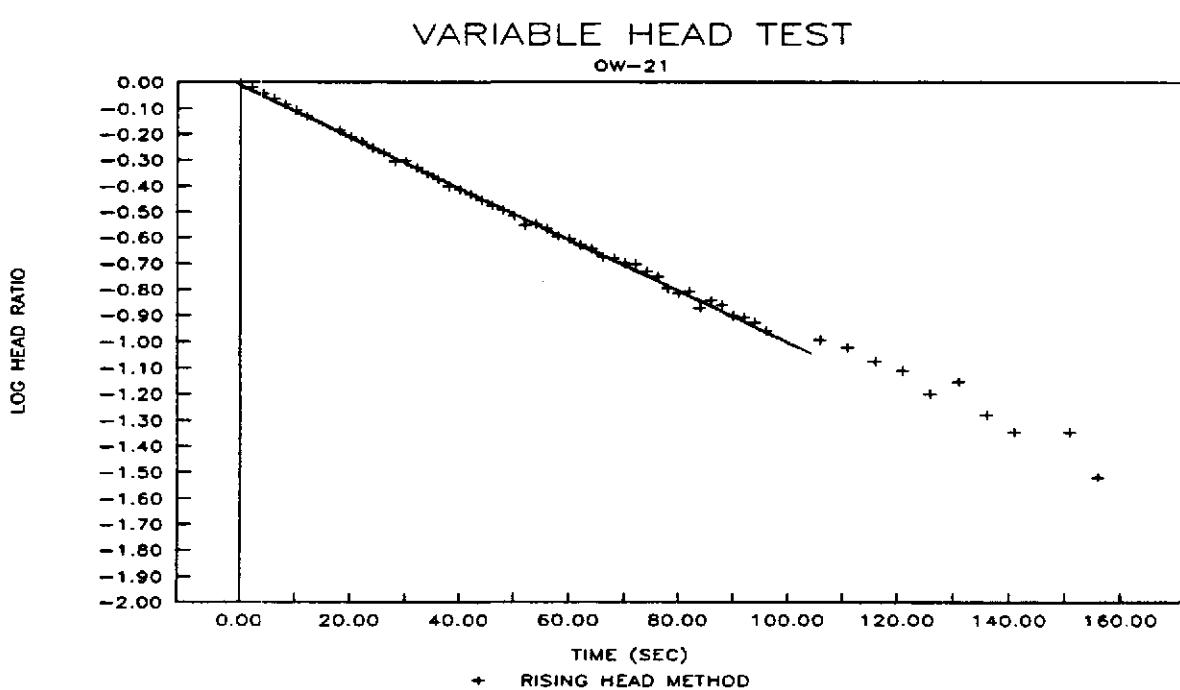
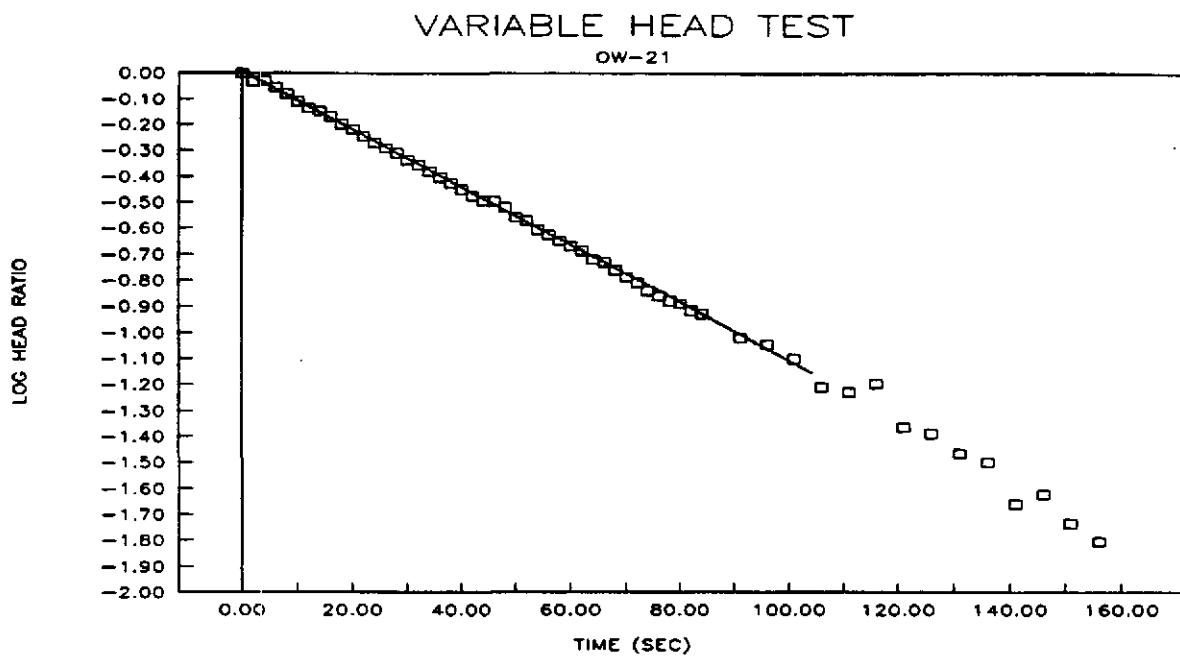
WELL OW-19A

HVORSLEV ANALYSIS

Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE D9

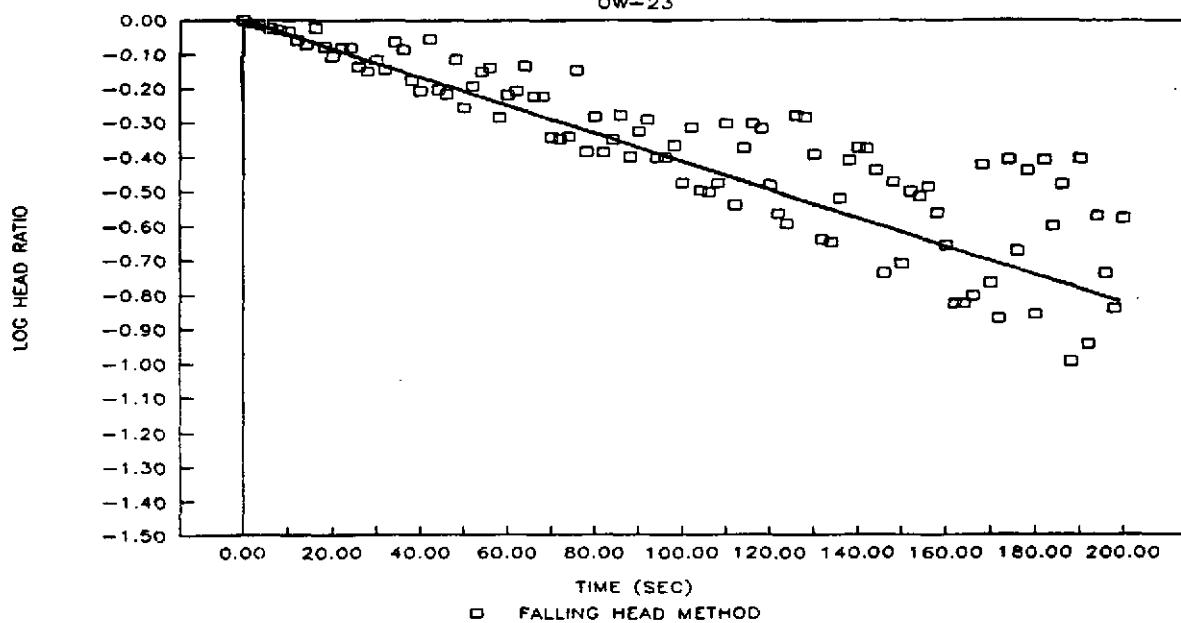


JOB No:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No:	MA01-305

WELL OW-21
HVORSLEV ANALYSIS

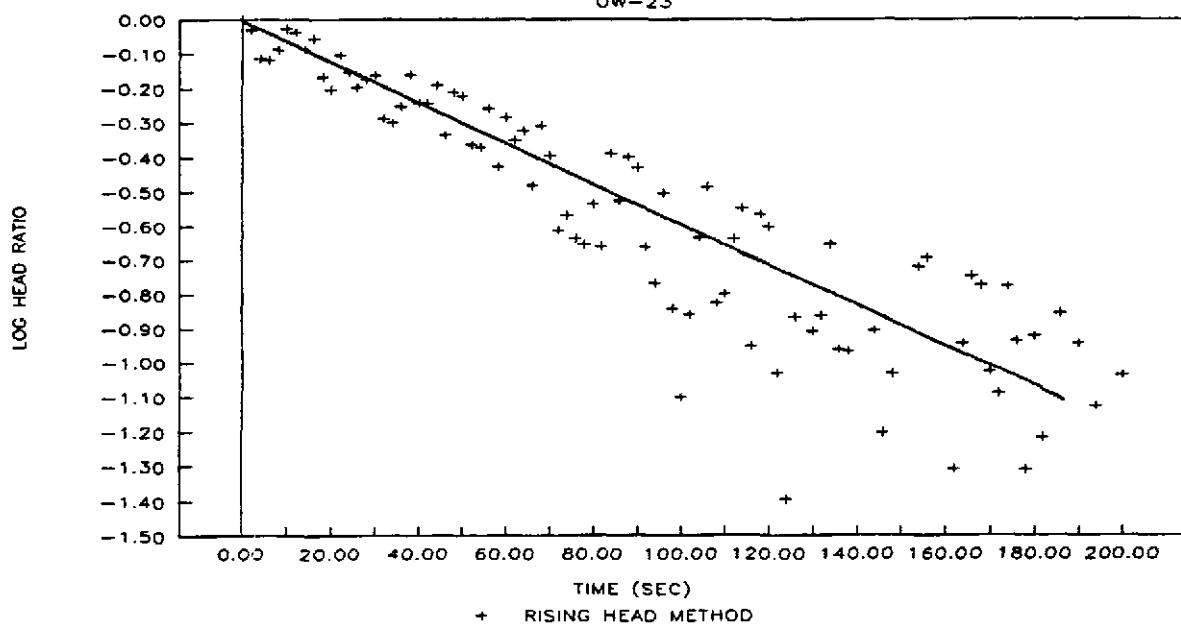
VARIABLE HEAD TEST

OW-23



VARIABLE HEAD TEST

OW-23



JOB NO.: 893-6255 SCALE: AS SHOWN

DRAWN: FG DATE: 11/21/90

CHECKED: VB DWG. NO.: MA01-306

WELL OW-23

HVORSLEV ANALYSIS

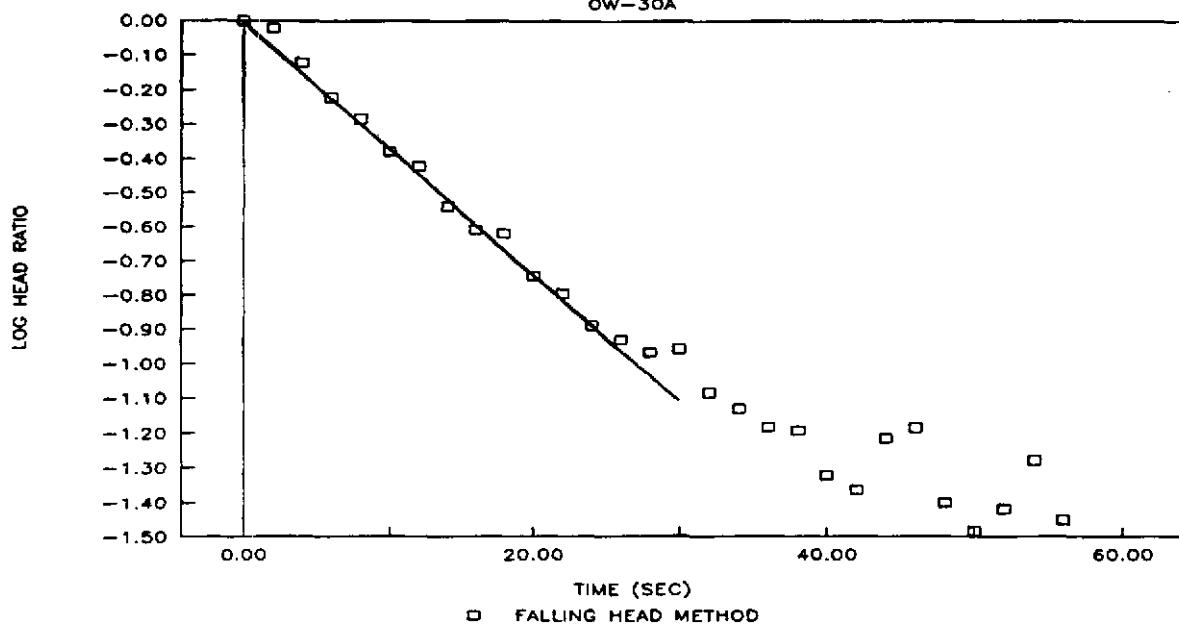
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE D11

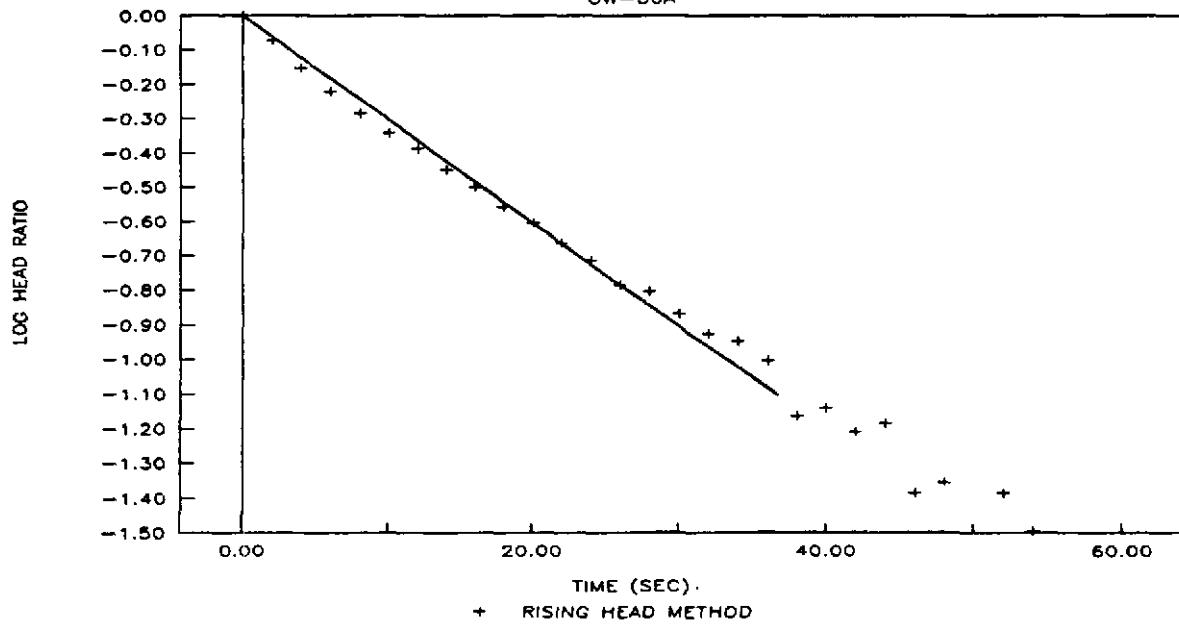
VARIABLE HEAD TEST

OW-30A



VARIABLE HEAD TEST

OW-30A



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

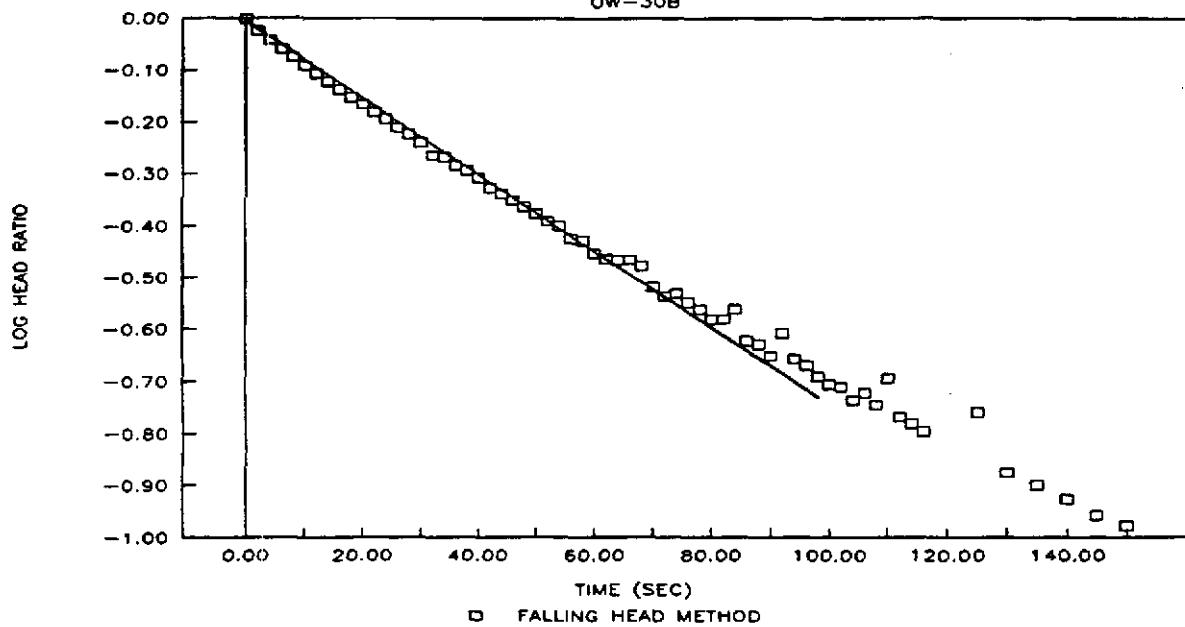
DWG. NO.: MA01-307

WELL OW-30A

HVORSLEV ANALYSIS

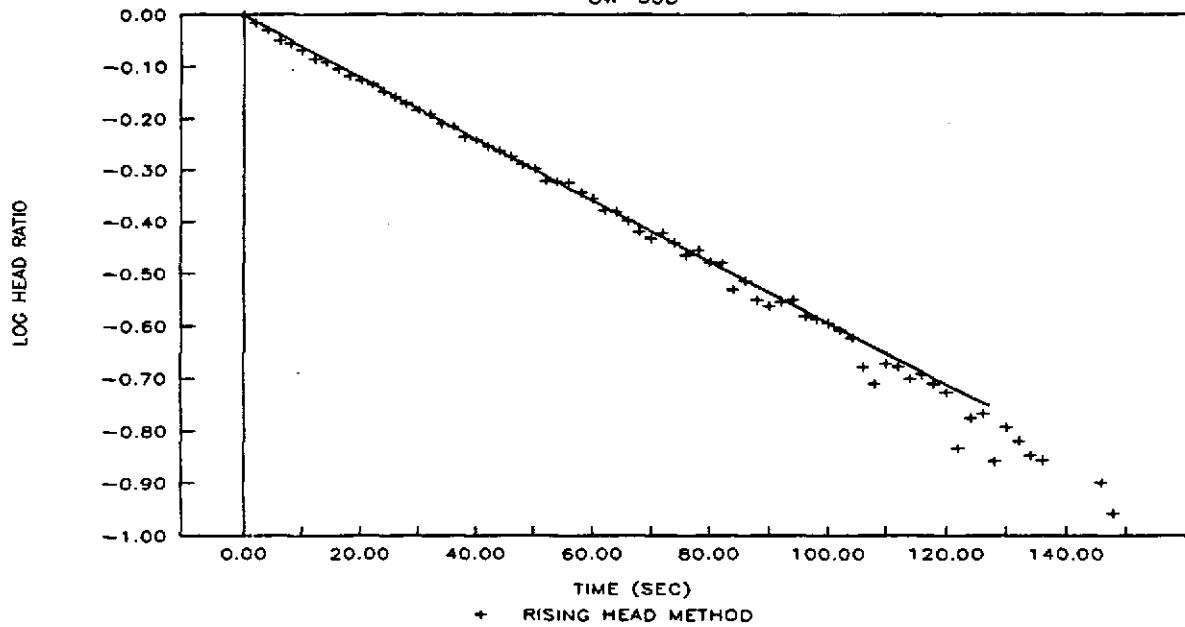
VARIABLE HEAD TEST

OW-30B



VARIABLE HEAD TEST

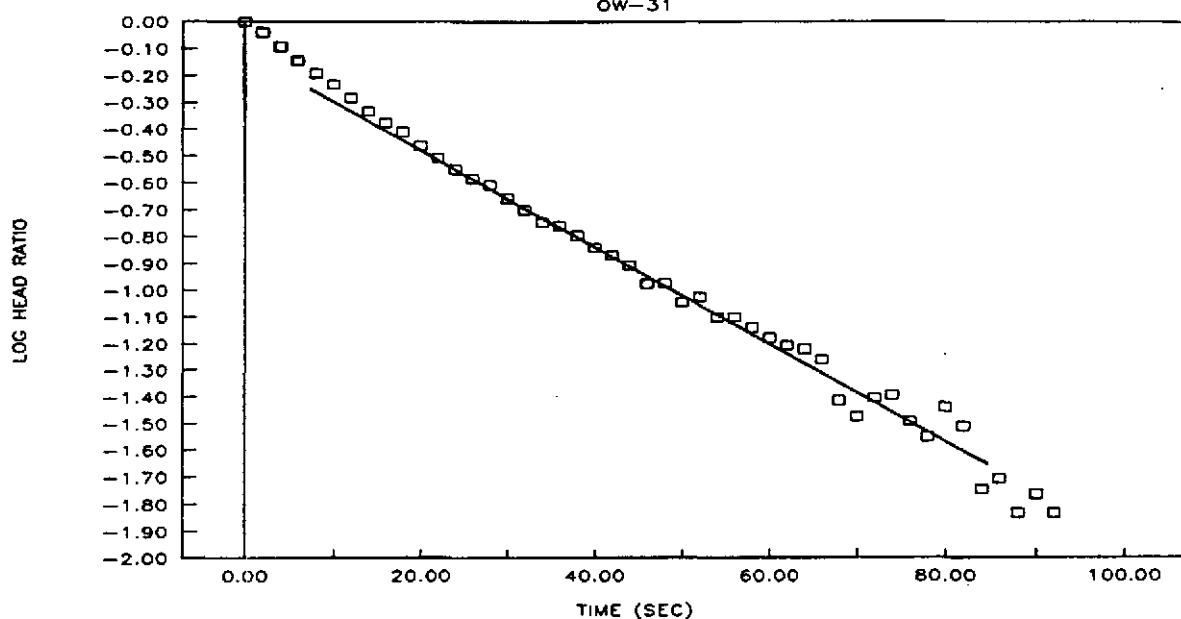
OW-30B



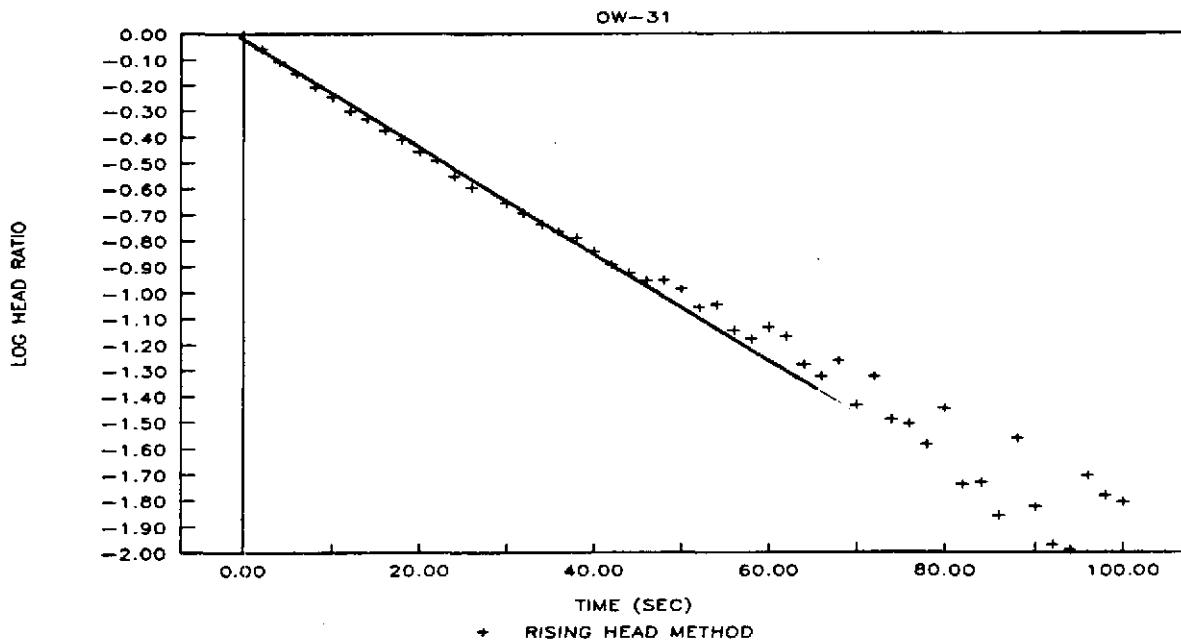
JOB NO.:	893-6255	SCALE:	AS SHOWN
DRAWE:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO.:	MA01-308

WELL OW-30B
HVORSLEV ANALYSIS

VARIABLE HEAD TEST
OW-31



VARIABLE HEAD TEST
OW-31

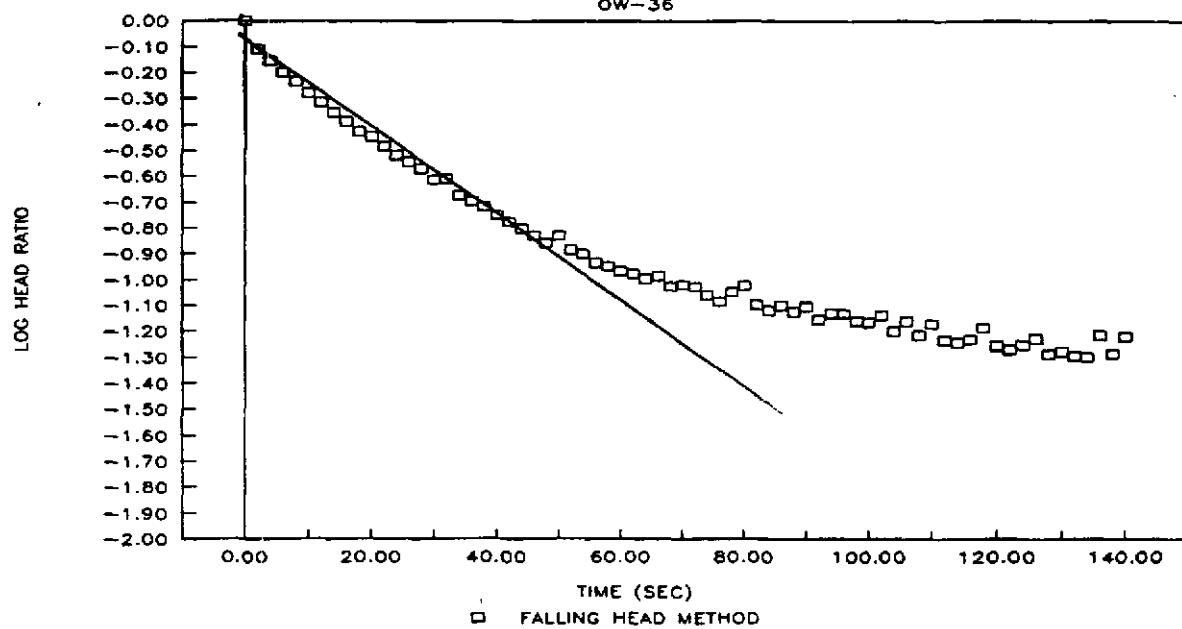


JOB No:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VS	DRG. NO.:	MA01-309

WELL OW-31
HVORSLEV ANALYSIS

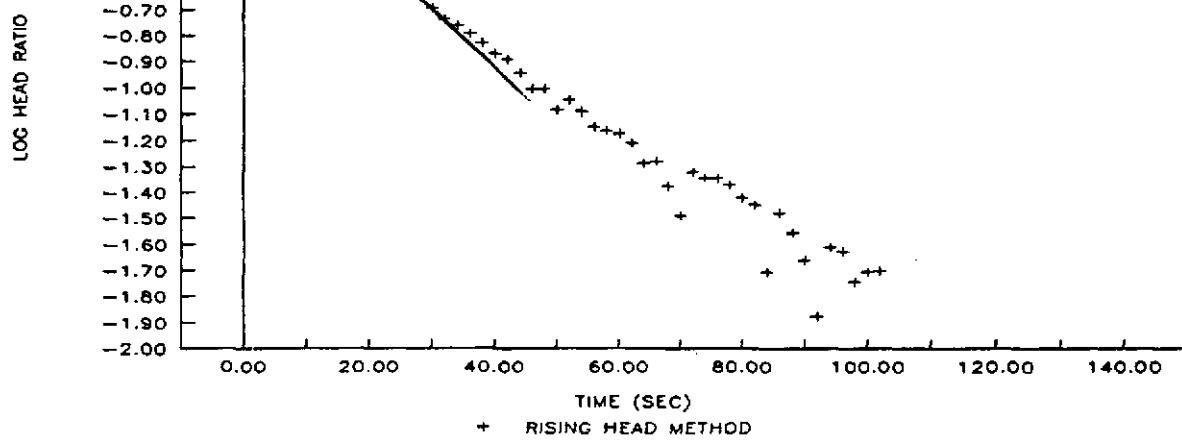
VARIABLE HEAD TEST

OW-36



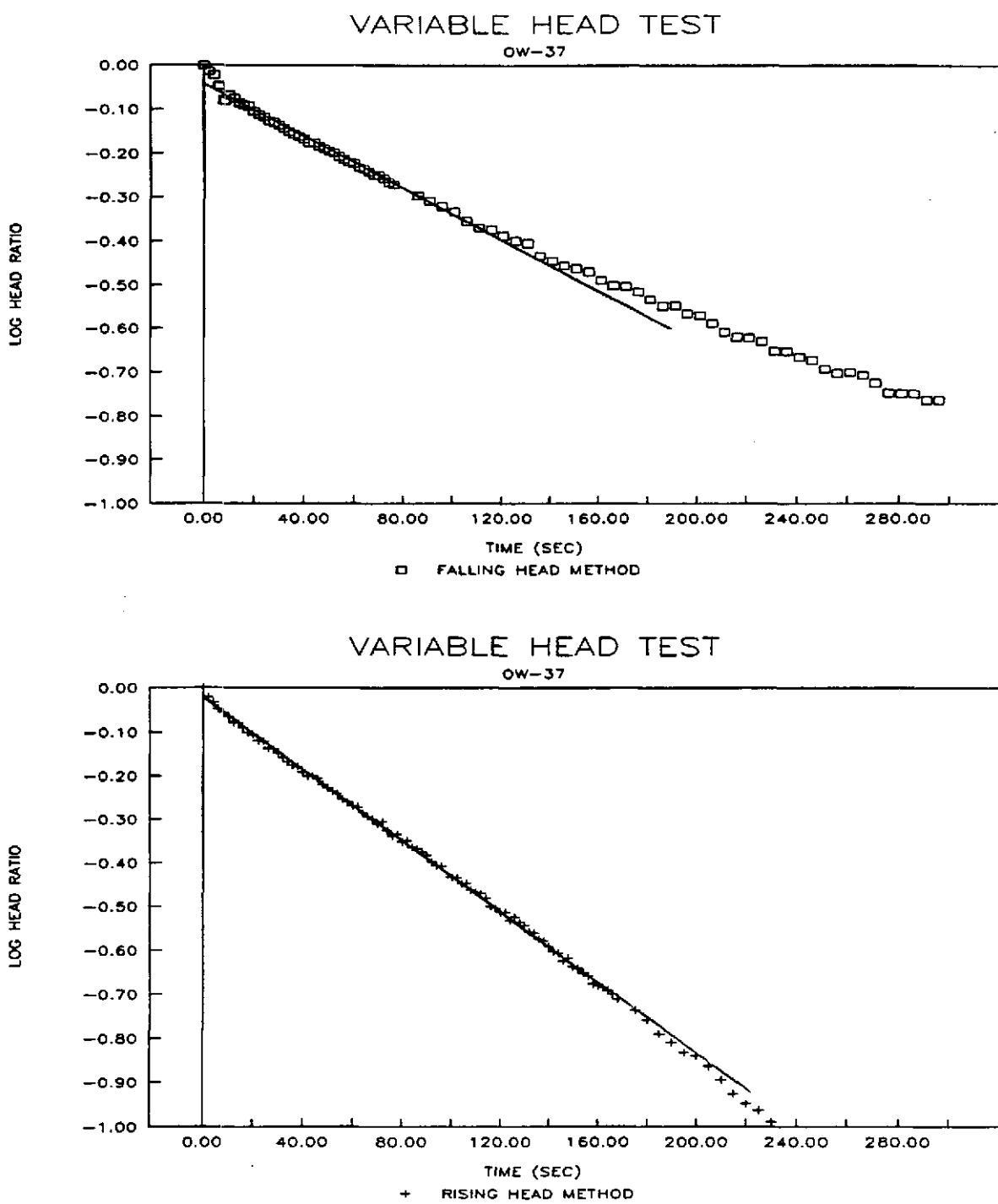
VARIABLE HEAD TEST

OW-36



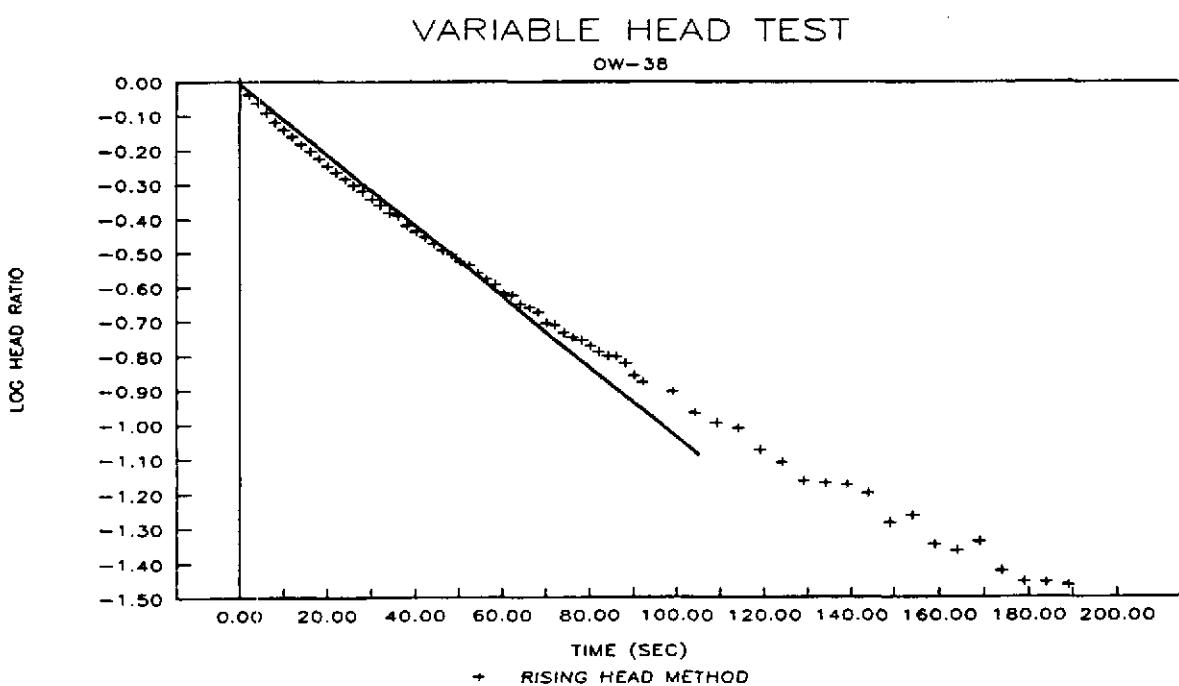
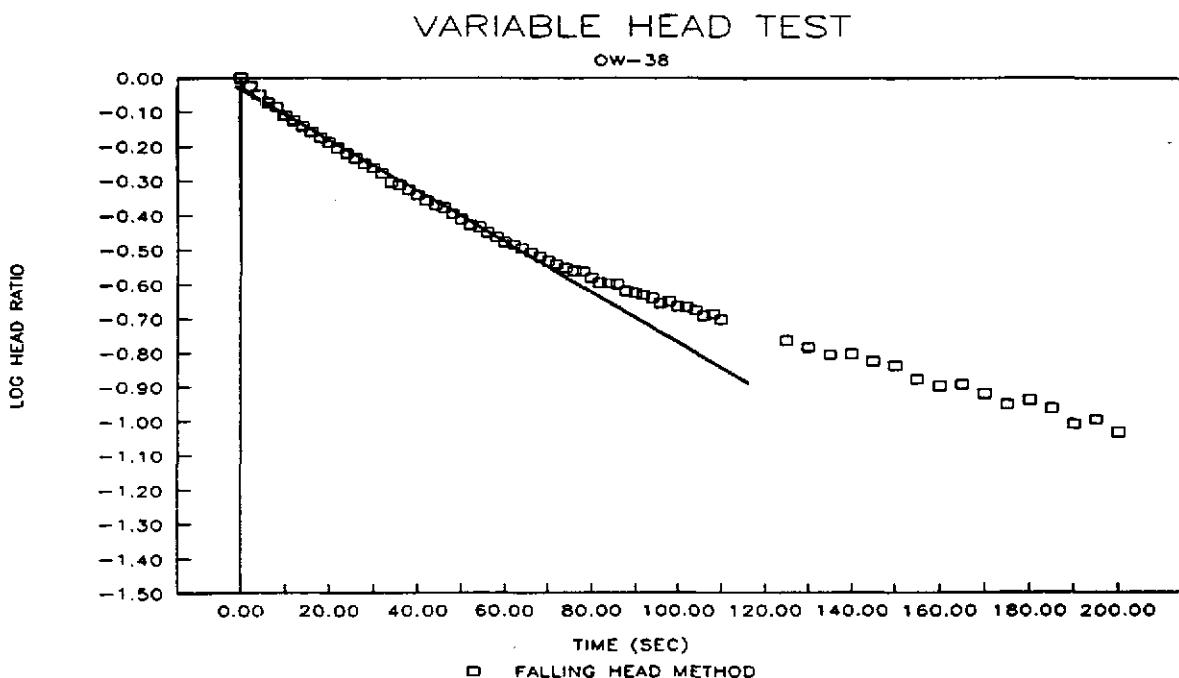
JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VS	DWG. NO.:	MA01-311

WELL OW-36
HVORSLEV ANALYSIS



JOB NO.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO.:	MA01-312

WELL OW-37
HVORSLEV ANALYSIS

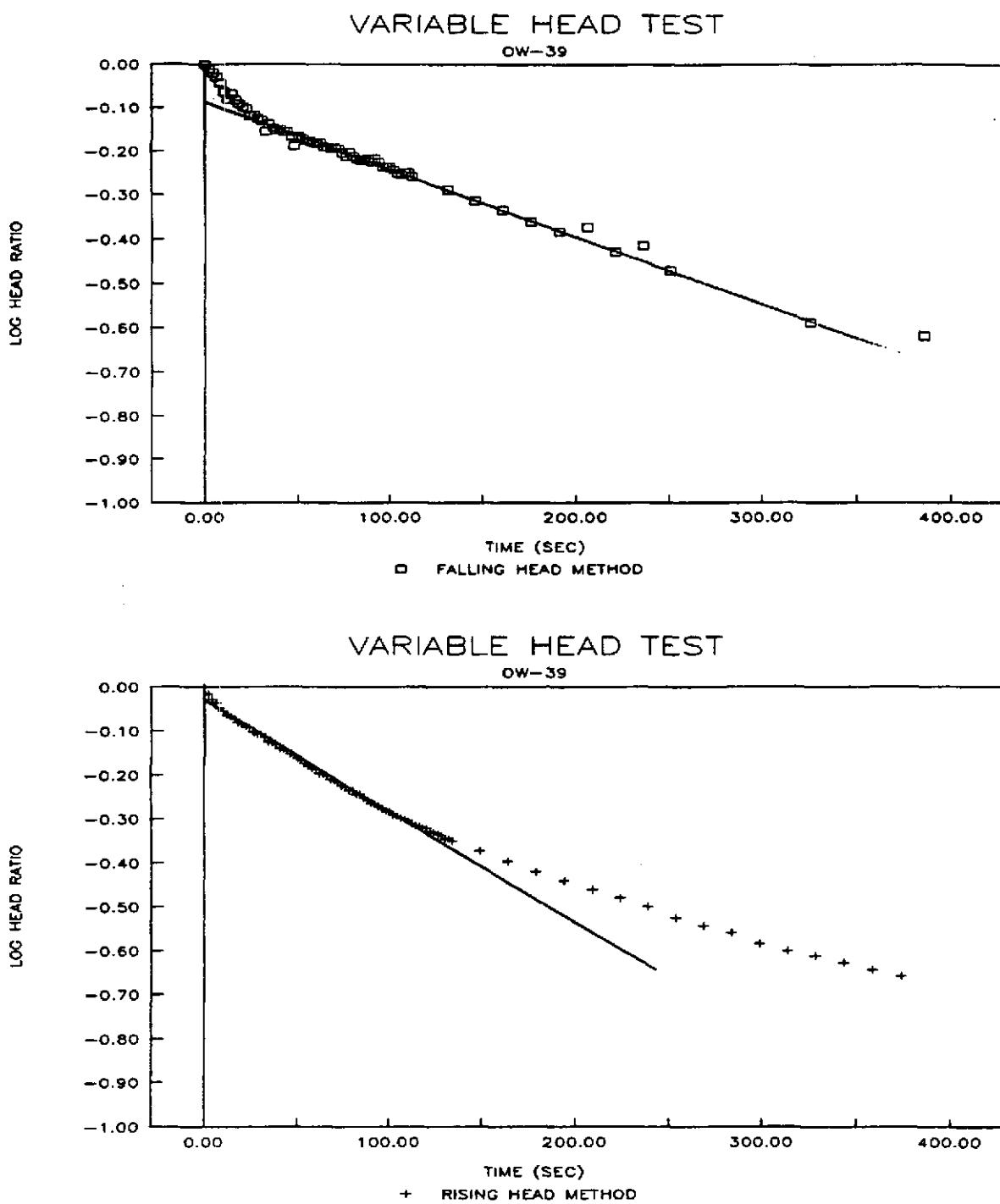


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DRG. No.:	MA01-313

WELL OW-38
HVORSLEV ANALYSIS

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE D18

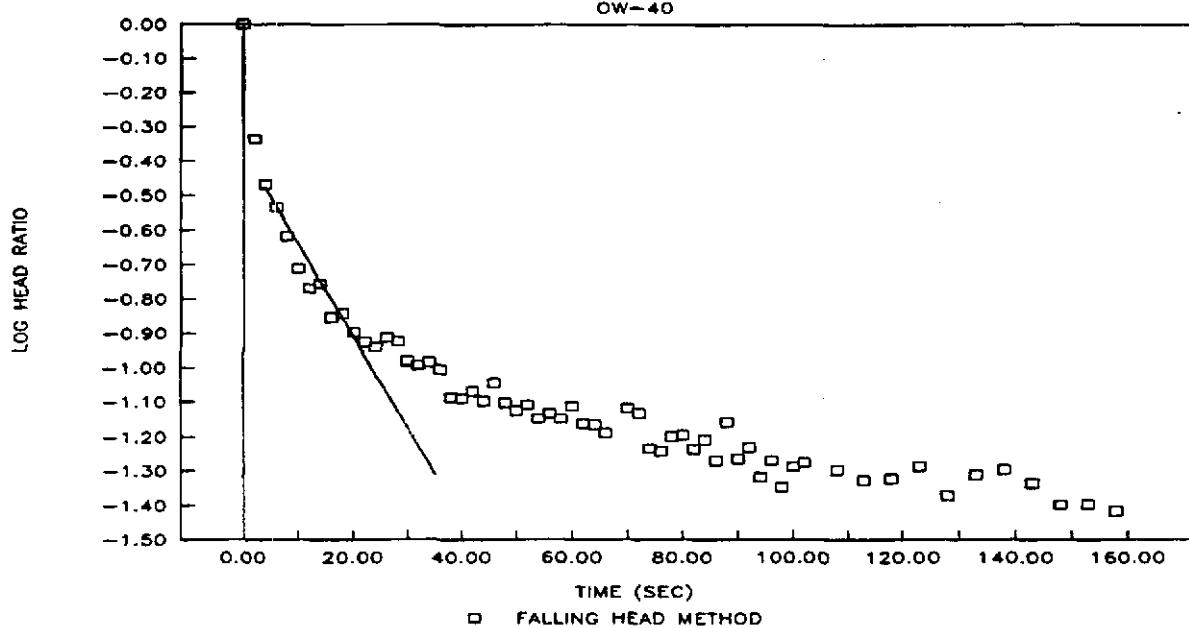


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	V3	DWG. No.:	MA01-314

WELL OW-39
HVORSLEV ANALYSIS

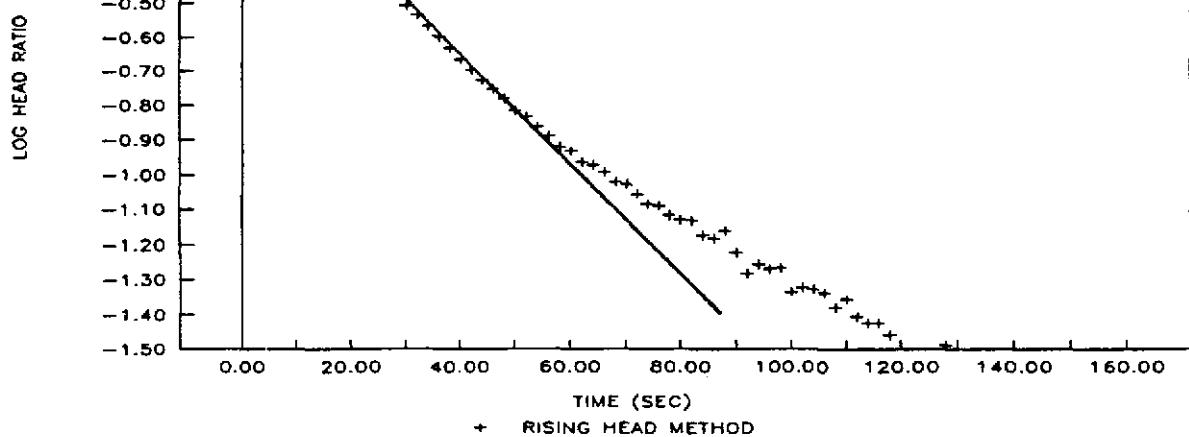
VARIABLE HEAD TEST

OW-40



VARIABLE HEAD TEST

OW-40



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

DWG. No.: MA01-315

WELL OW-40

HVORSLEV ANALYSIS

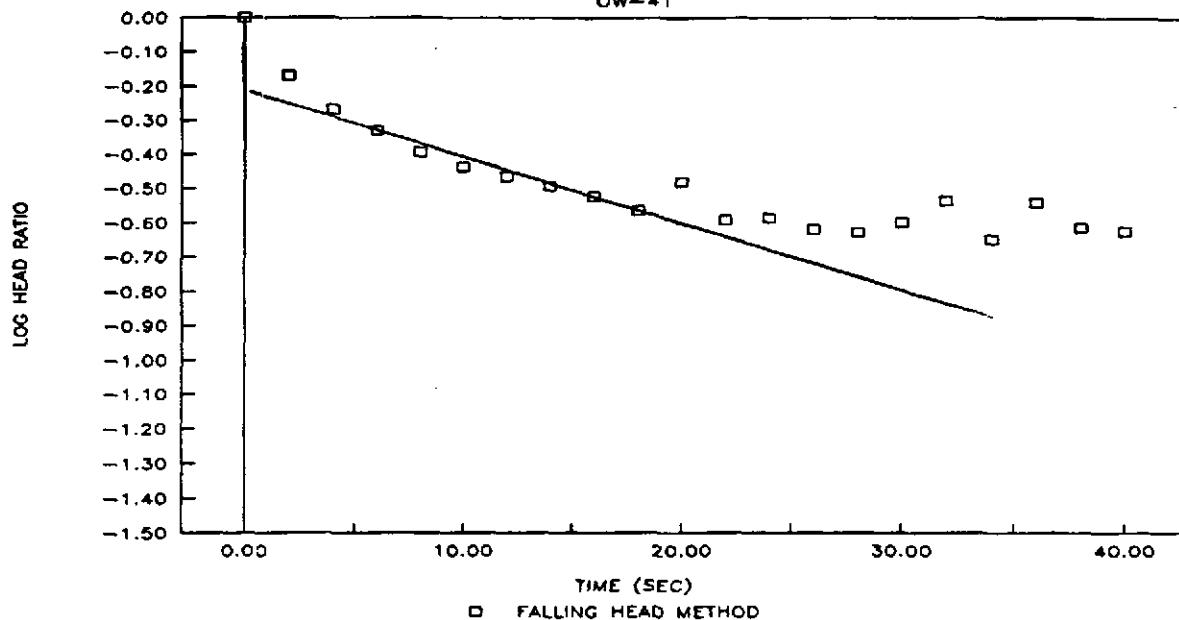
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE D20

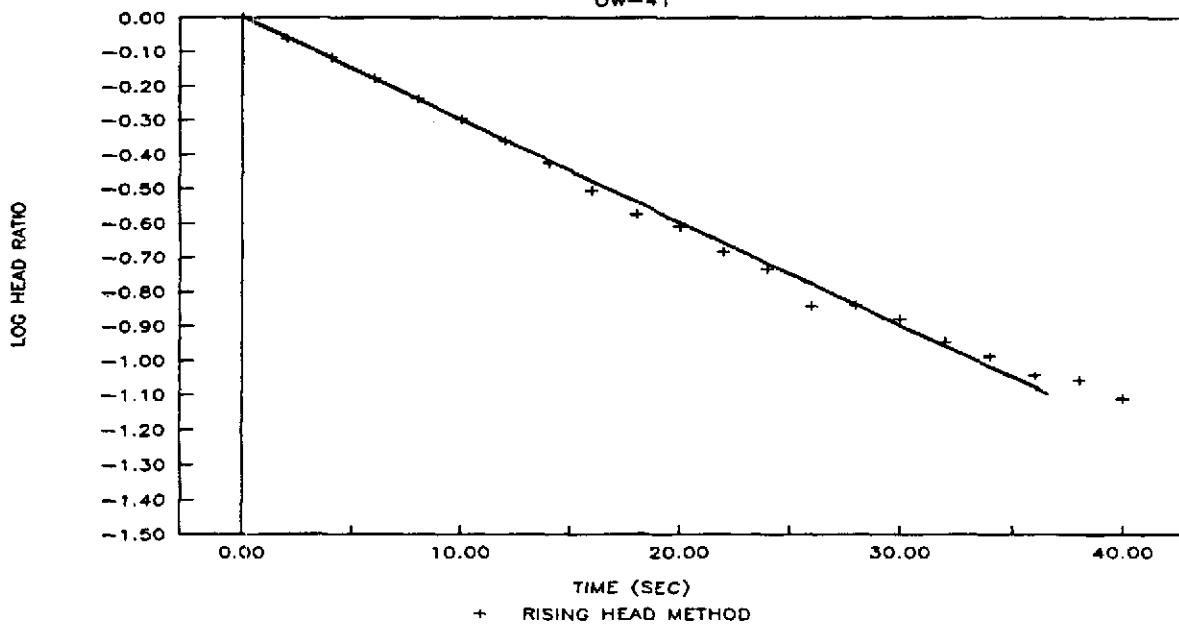
VARIABLE HEAD TEST

OW-41



VARIABLE HEAD TEST

OW-41



188666

JOB NO.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO.:	MA01-316

**WELL OW-41
HVORSLEV ANALYSIS**

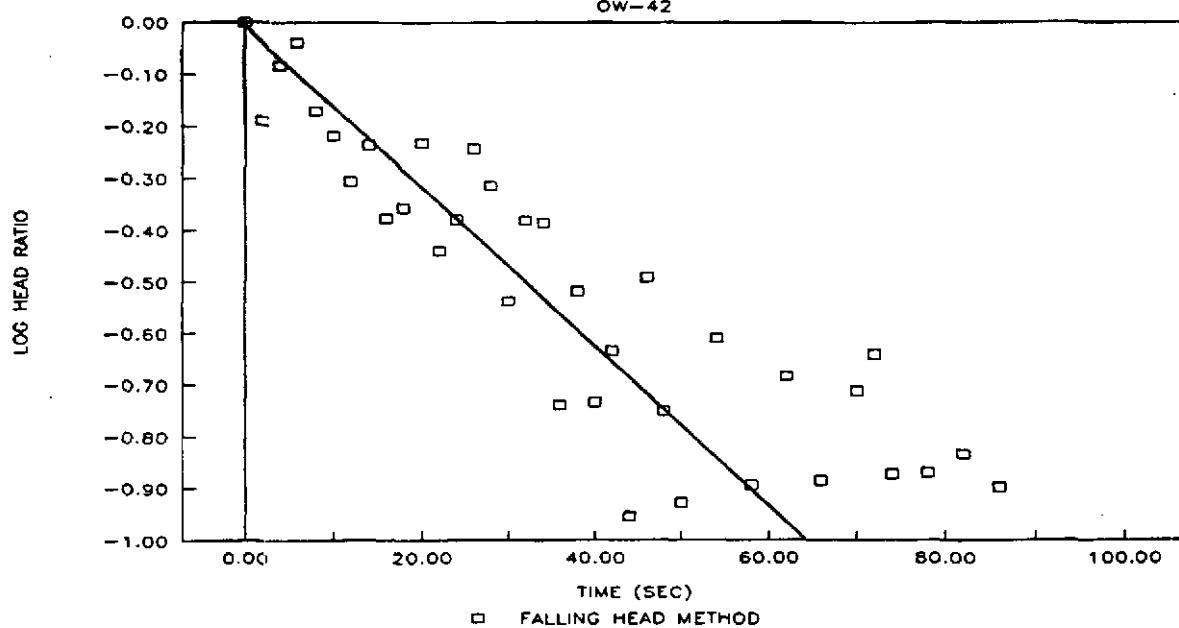
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE D21

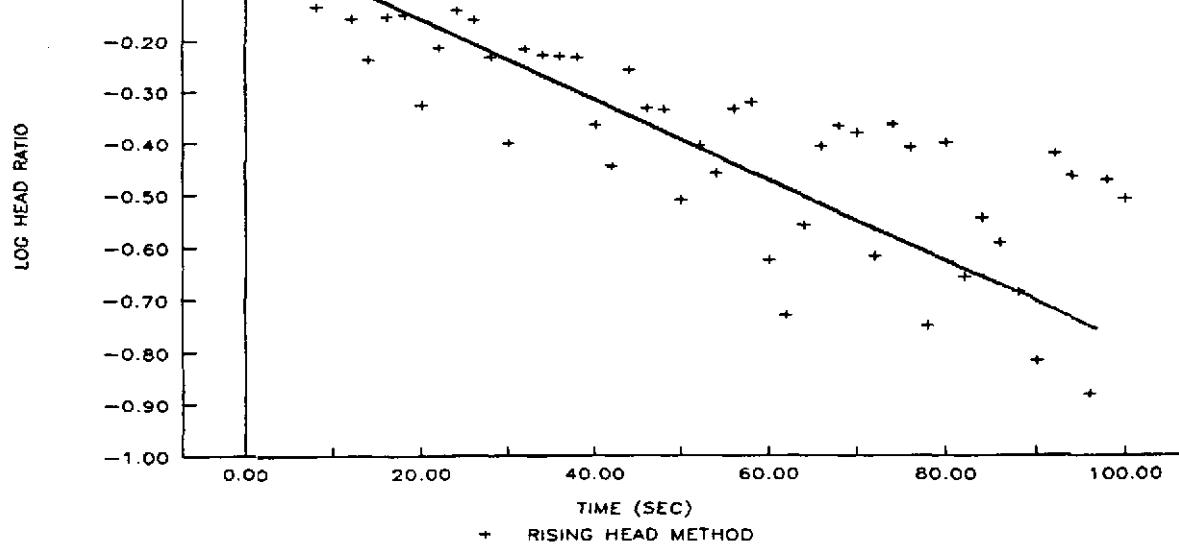
VARIABLE HEAD TEST

OW-42



VARIABLE HEAD TEST

OW-42



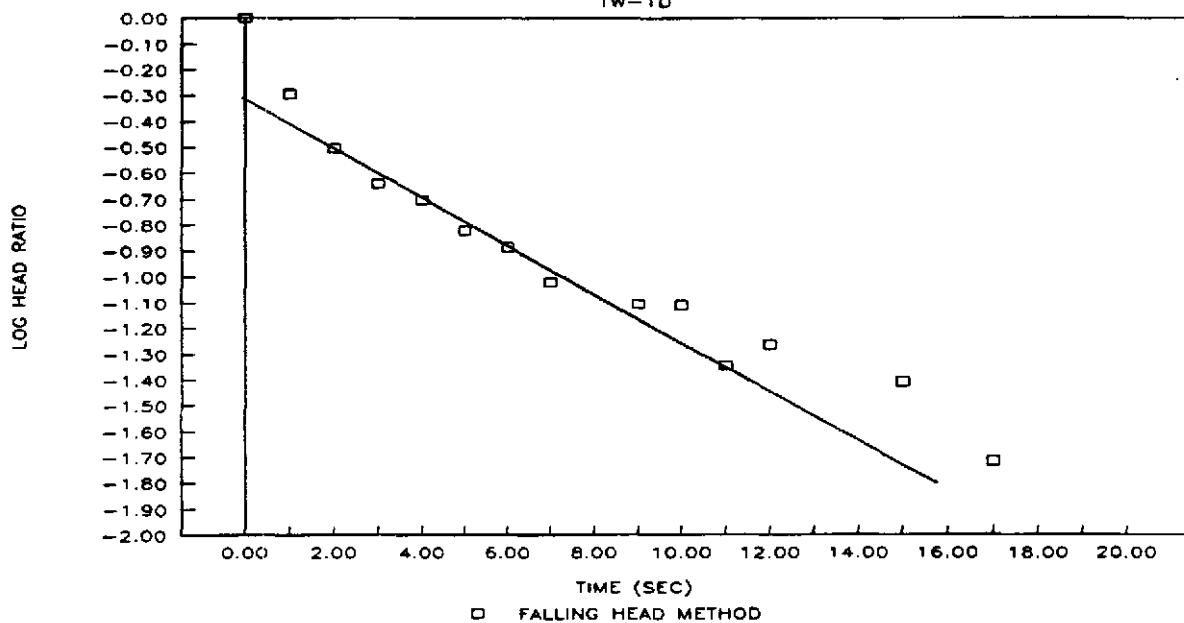
JOB NO:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO.:	MA01-317

WELL OW-42

HVORSLEV ANALYSIS

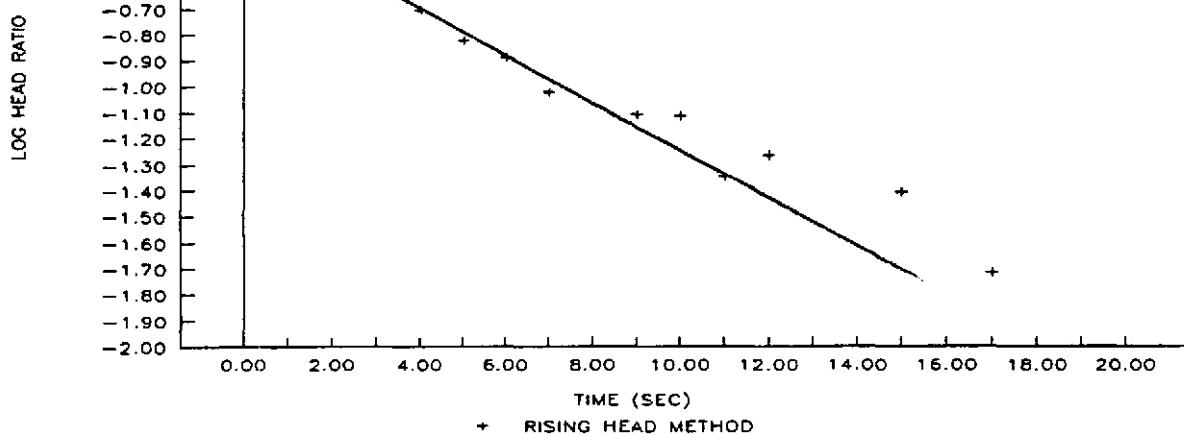
VARIABLE HEAD TEST

TW-1D



VARIABLE HEAD TEST

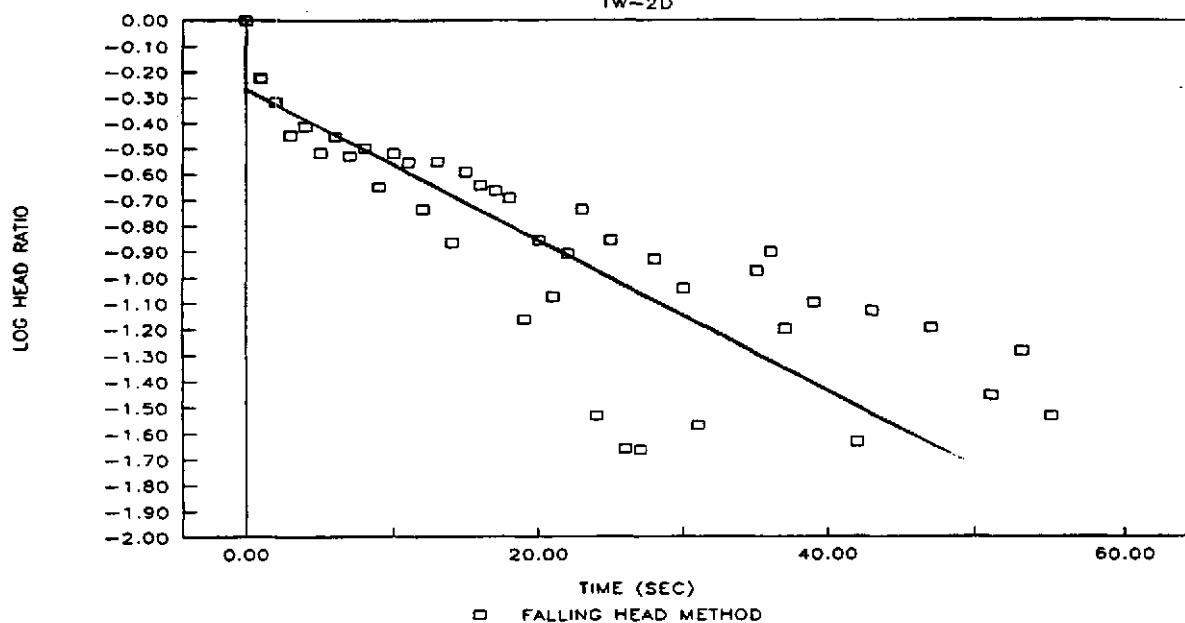
TW-1D



JOB No:	893-6255	SCALE:	AS SHOWN	WELL TW-1D HVORSLEV ANALYSIS
DRAWN:	FG	DATE:	11/21/90	
CHECKED:	VB	DWG. No:	MA01-318	
Golder Associates		INDUSTRI-PLEX SITE REMEDIAL TRUST	FIGURE D23	

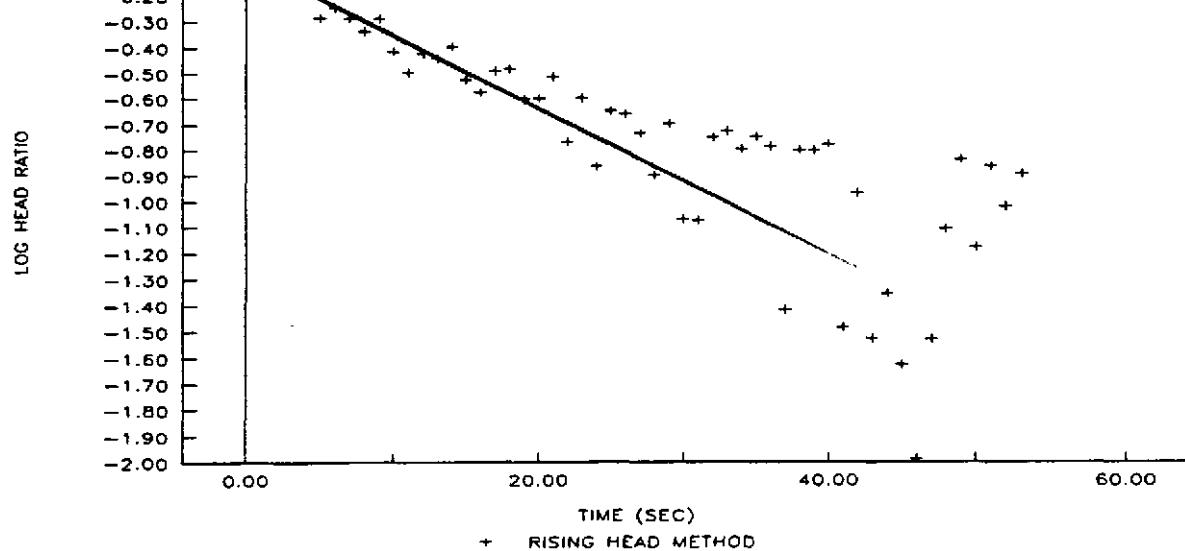
VARIABLE HEAD TEST

TW-2D



VARIABLE HEAD TEST

TW-2D

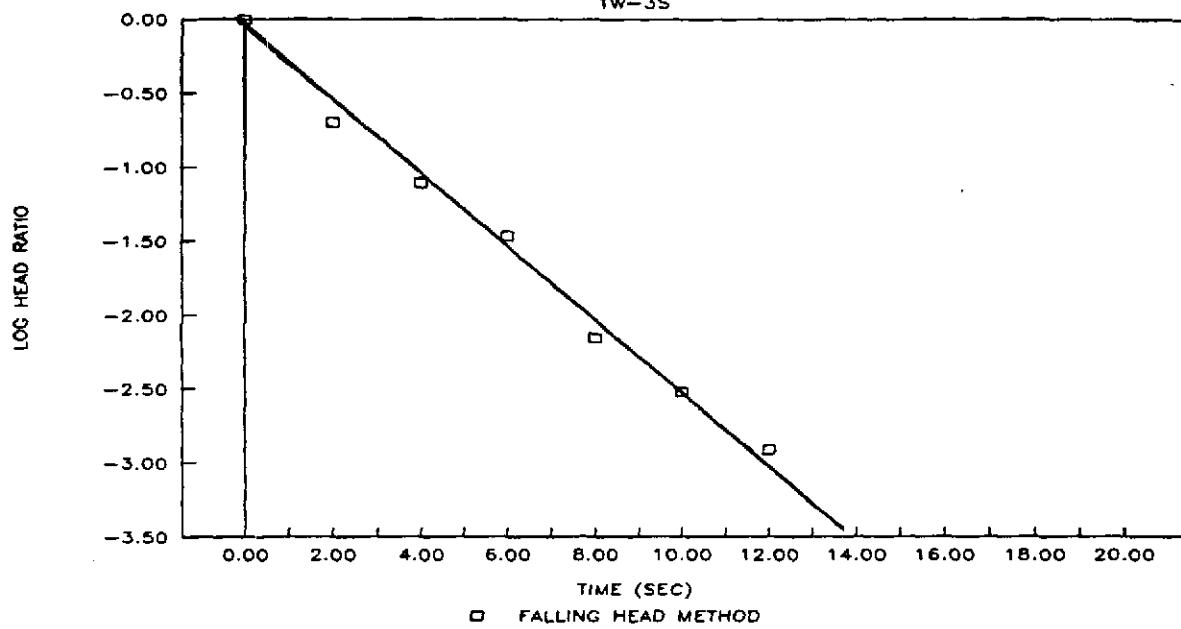


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No.:	MA01-319

WELL TW-2D
HVORSLEV ANALYSIS

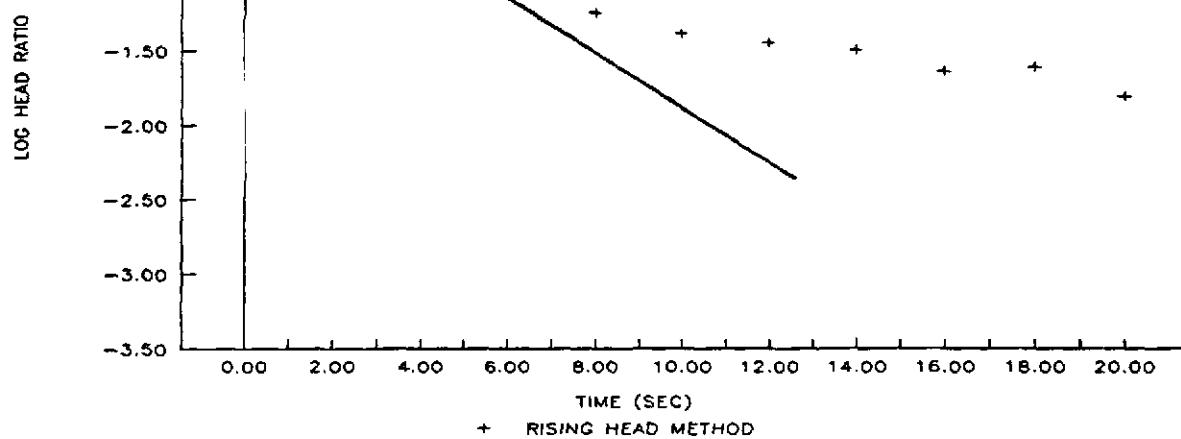
VARIABLE HEAD TEST

TW-3S



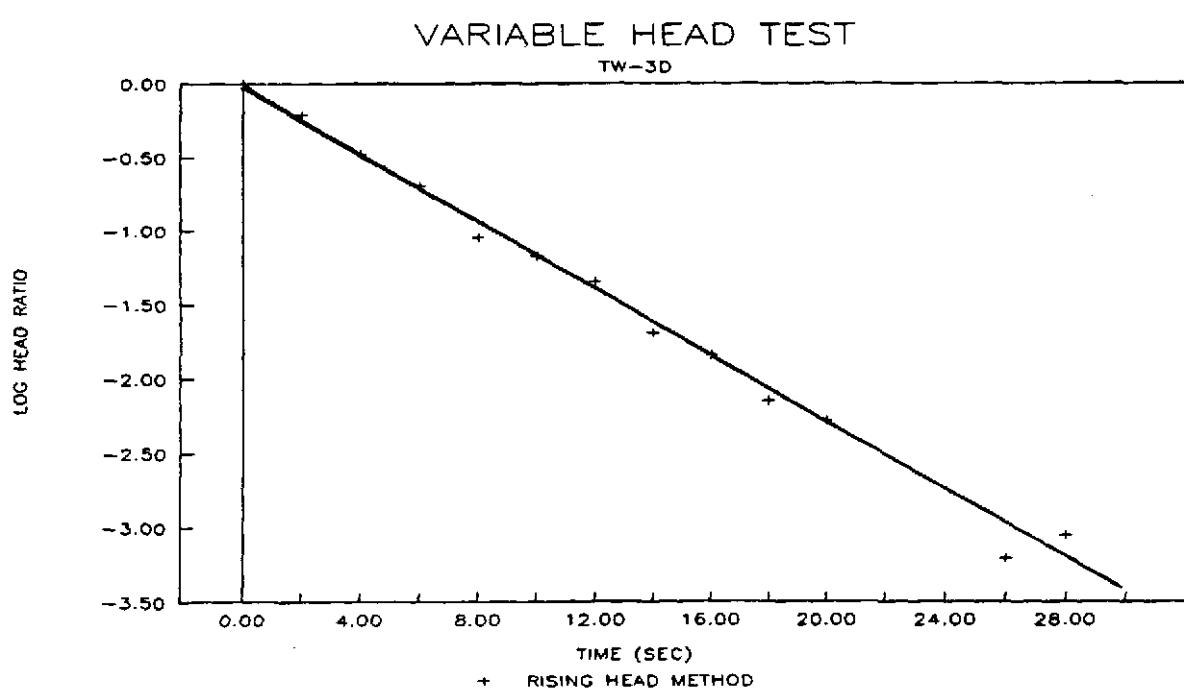
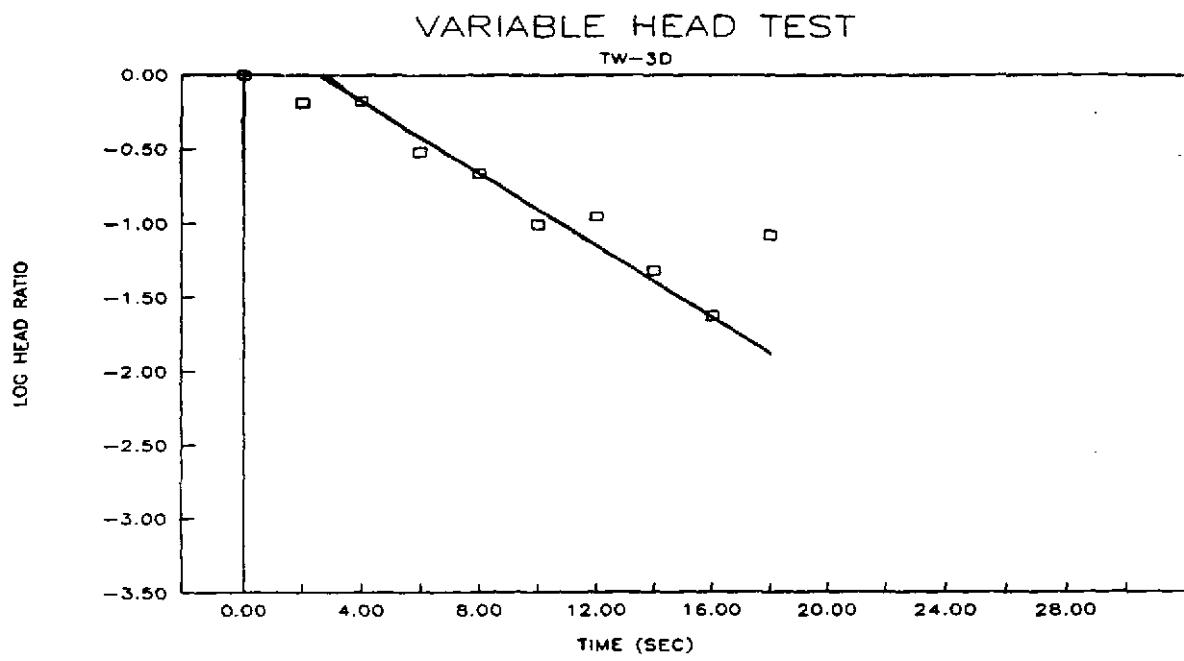
VARIABLE HEAD TEST

TW-3S



JOB NO:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO:	MA01-321

WELL TW-3S
HVORSLEV ANALYSIS

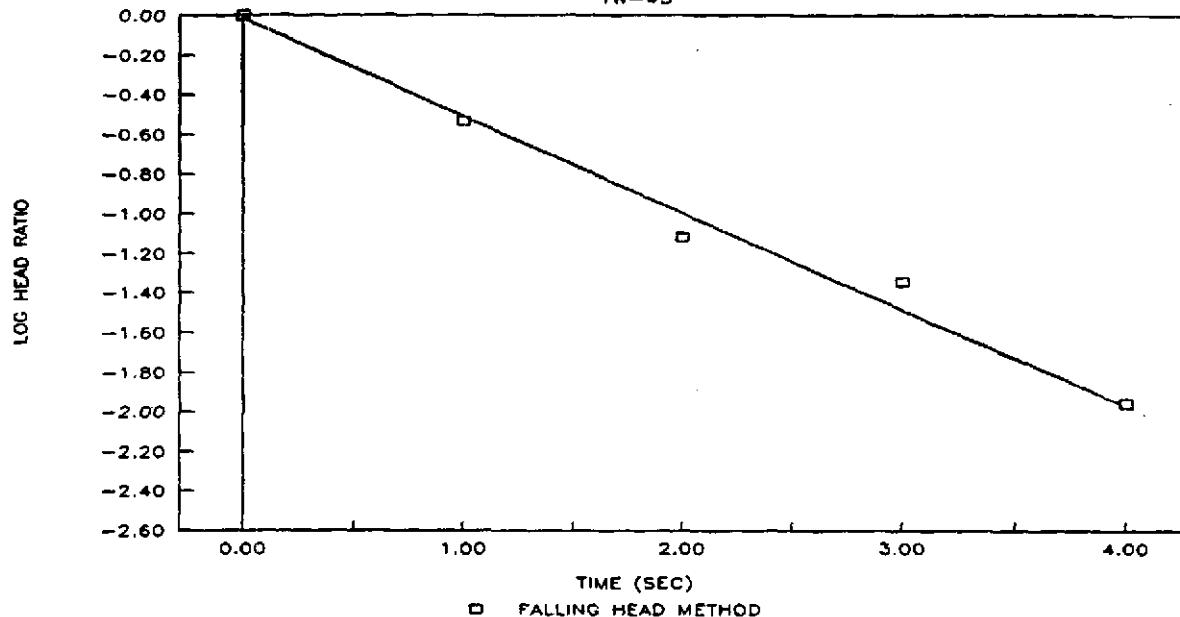


JOB No.: 893-6255	SCALE: AS SHOWN
DRILLED: FG	DATE: 11/21/90
CHECKED: VB	DWG. No.: MA01-320

WELL TW-3D
HVORSLEV ANALYSIS

VARIABLE HEAD TEST

TW-4S



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED:

✓

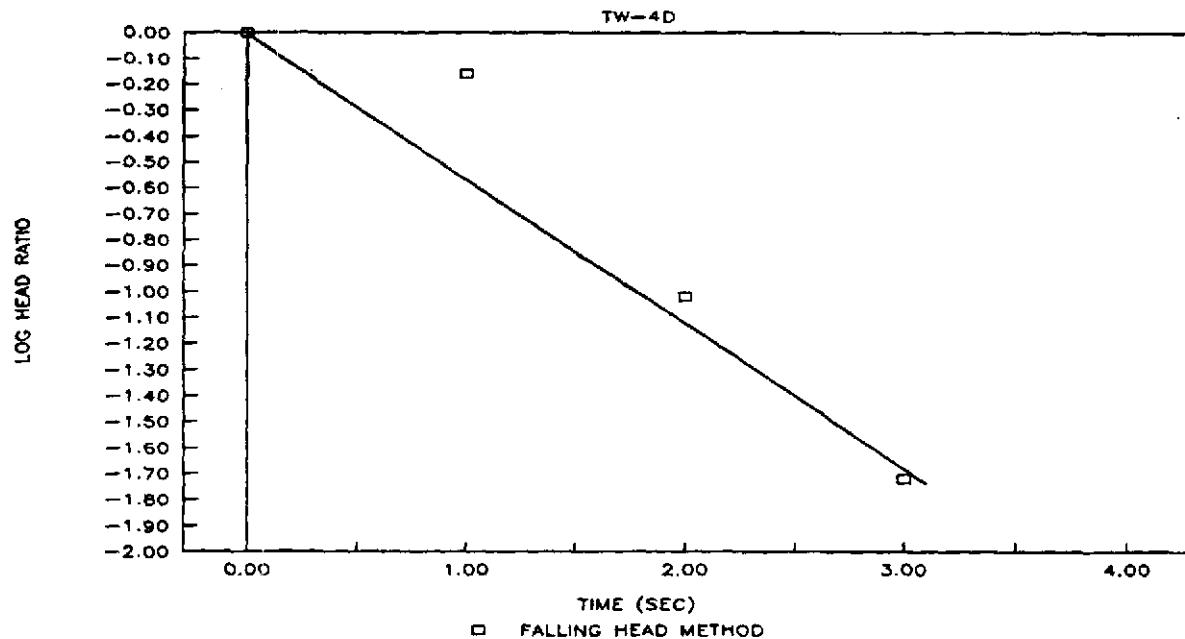
DWG. No.: MA01-323

WELL TW-4S

HVORSLEV ANALYSIS

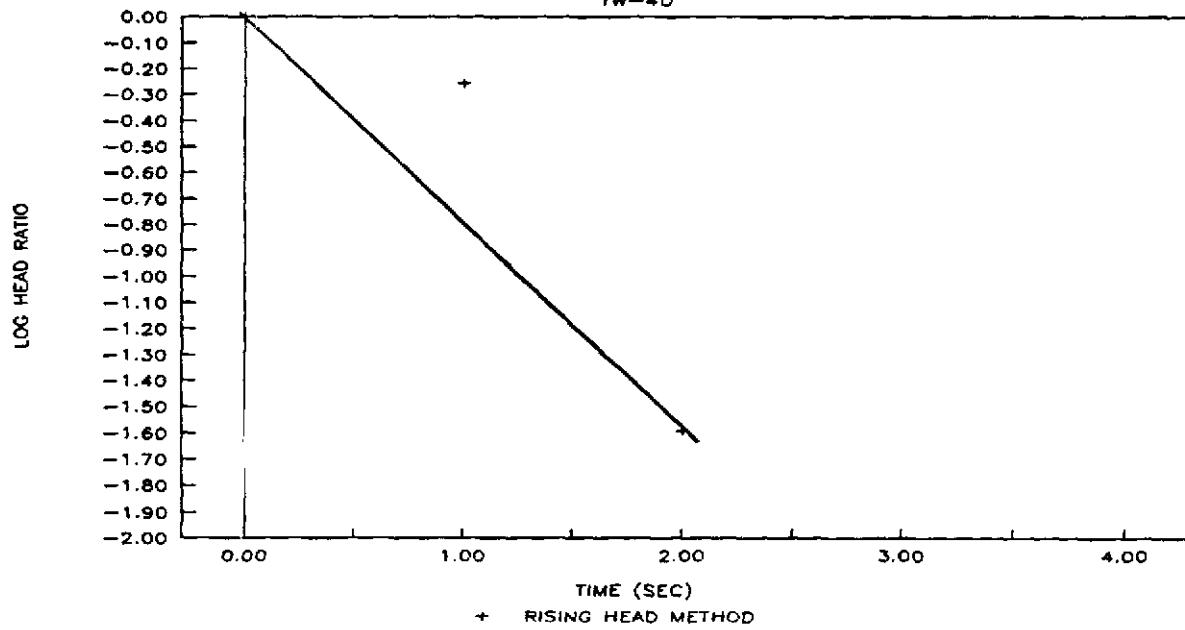
VARIABLE HEAD TEST

TW-4D



VARIABLE HEAD TEST

TW-4D



JOB No.:

893-6255

SCALE:

AS SHOWN

DRAWN:

FG

DATE:

11/21/90

CHECKED:

VB

DWG. No.:

MA01-322

WELL TW-4D

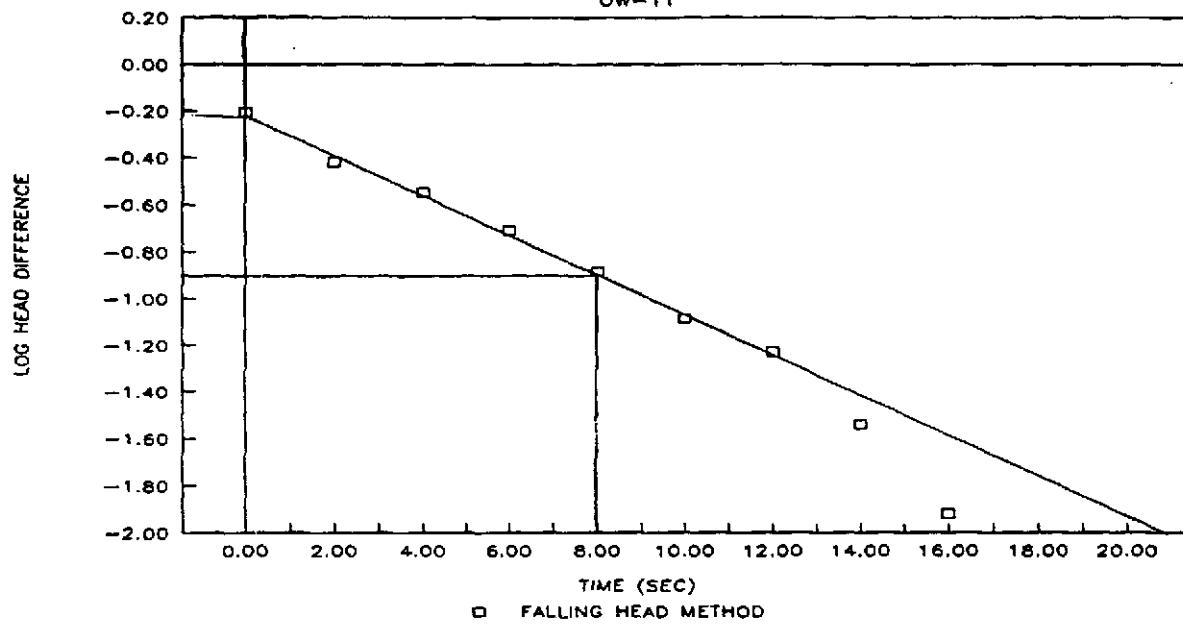
HVORSLEV ANALYSIS

Appendix E

**Graphical Details for Bouwer and
Rice Method Analysis**

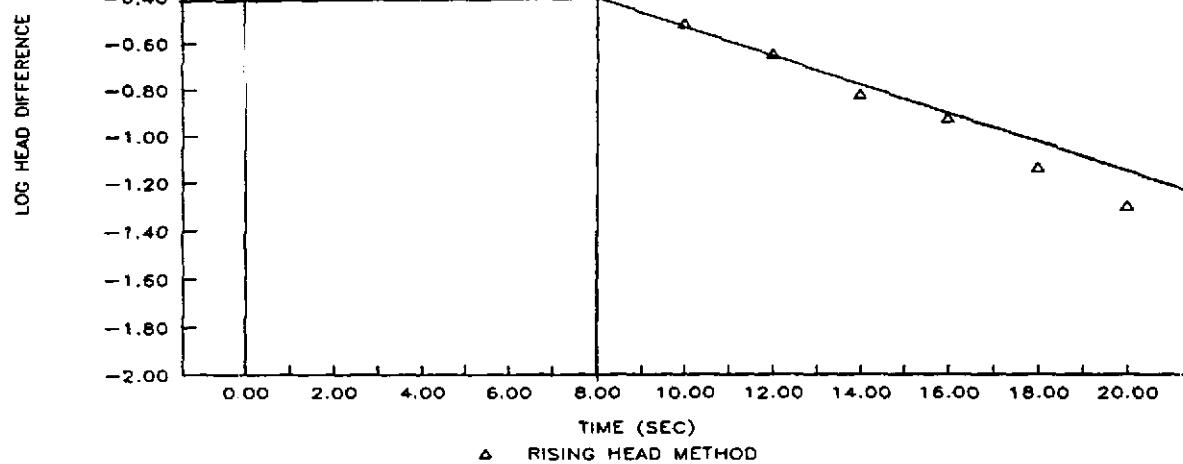
VARIABLE HEAD TEST

OW-11



VARIABLE HEAD TEST

OW-11

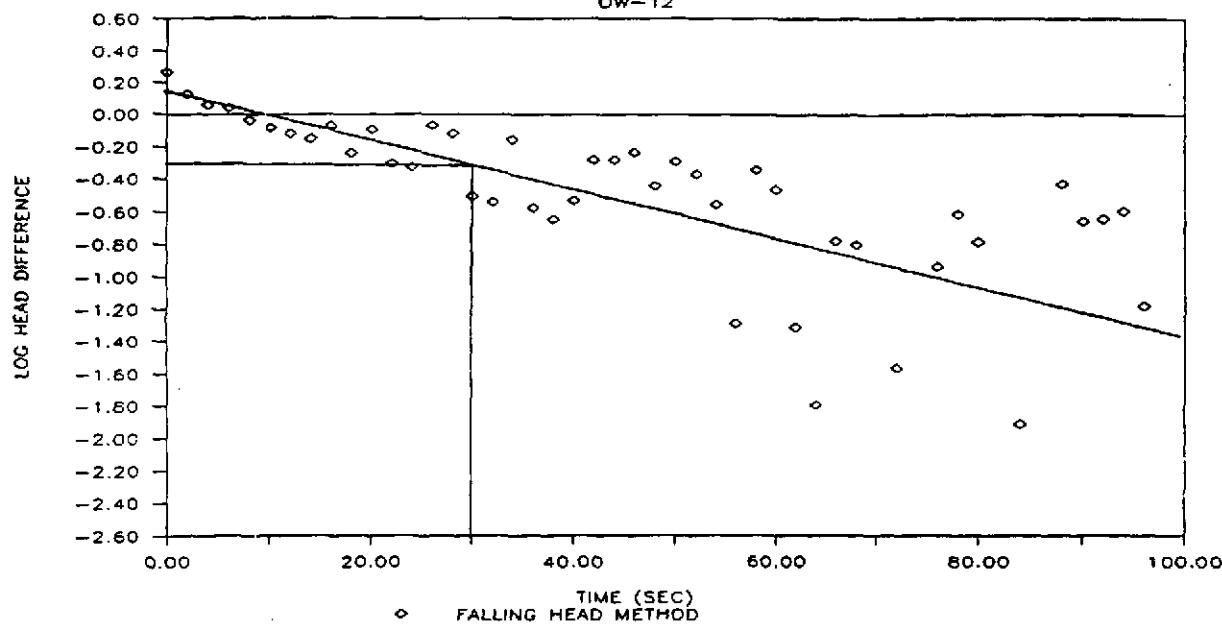


JOB No:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VF	DWG. NO.:	MA01-324

WELL OW-11
BOUWER AND RICE ANALYSIS

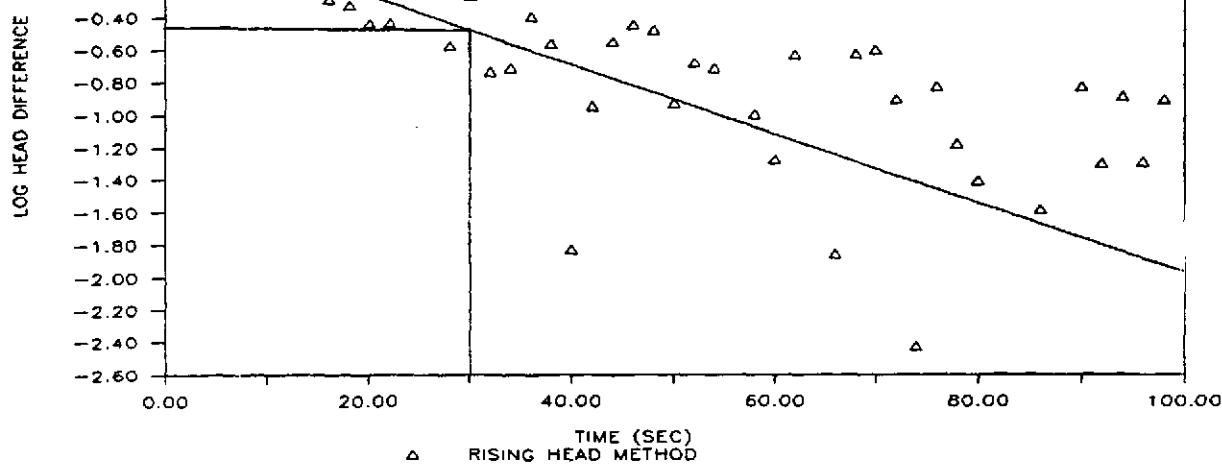
VARIABLE HEAD TEST

OW-12



VARIABLE HEAD TEST

OW-12



JOB No.: 893-6255 SCALE: AS SHOWN

DRAWN: FG DATE: 11/21/90

CHECKED: VB DWG. NO.: MA01-325

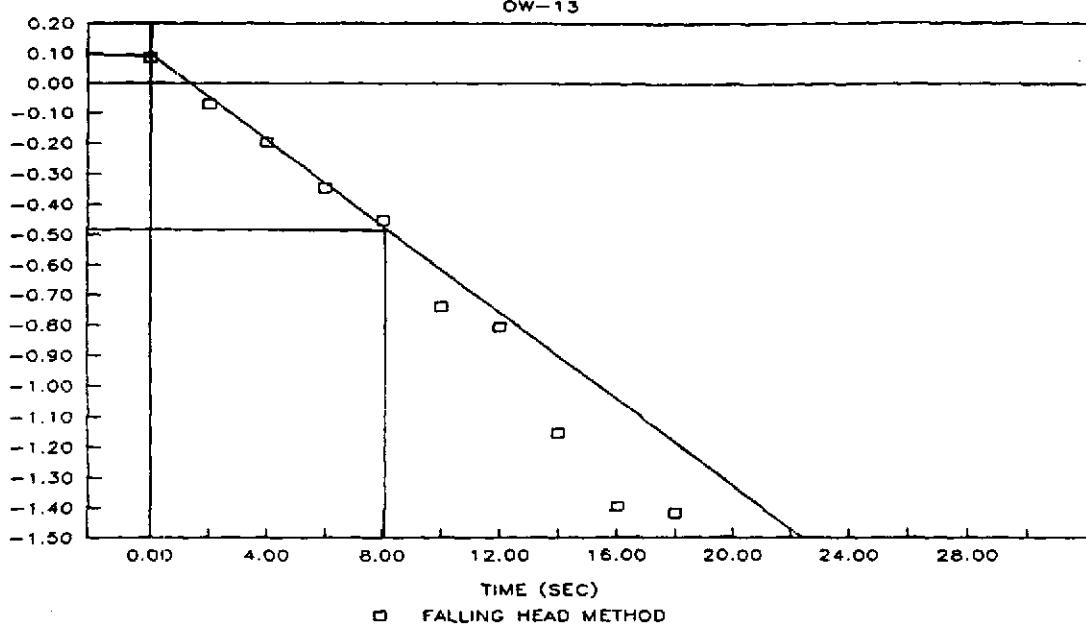
WELL OW-12

BOUWER AND RICE ANALYSIS

VARIABLE HEAD TEST

OW-13

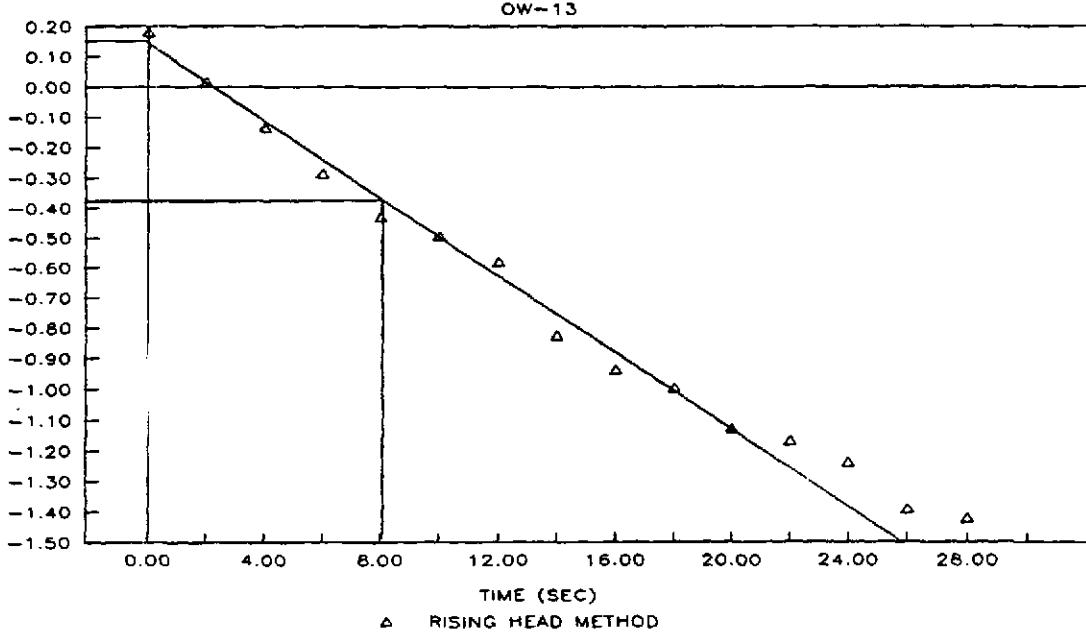
LOG HEAD DIFFERENCE



VARIABLE HEAD TEST

OW-13

LOG HEAD DIFFERENCE



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN:

FG

DATE:

11/21/90

CHECKED:

VB

DWG. No.:

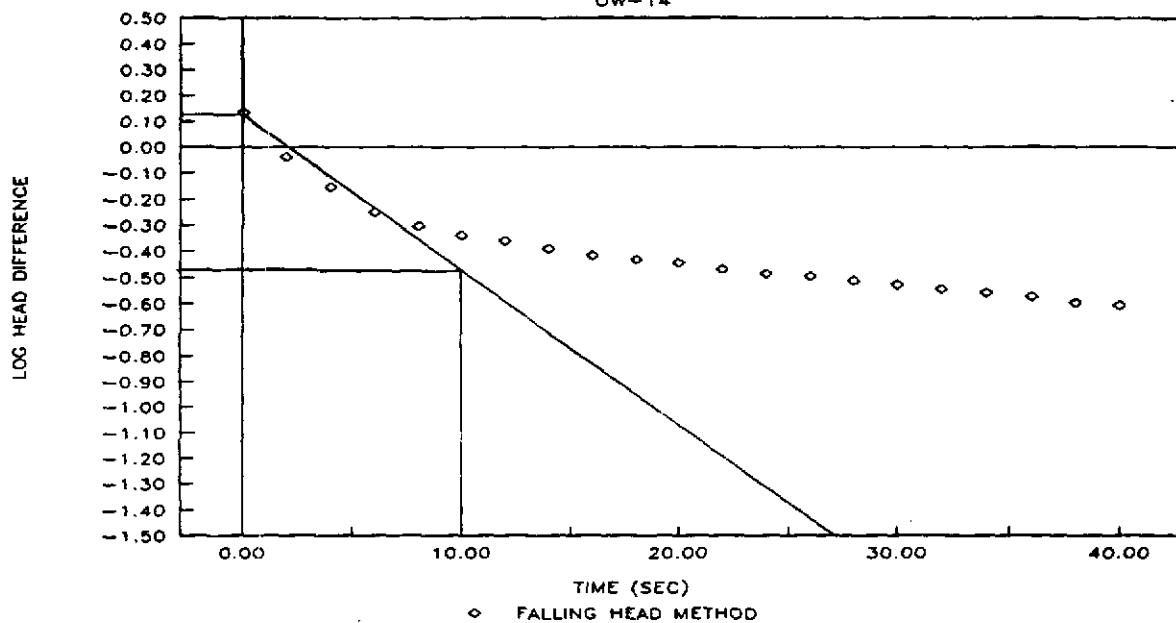
MA01-326

WELL OW-13

BOUWER AND RICE ANALYSIS

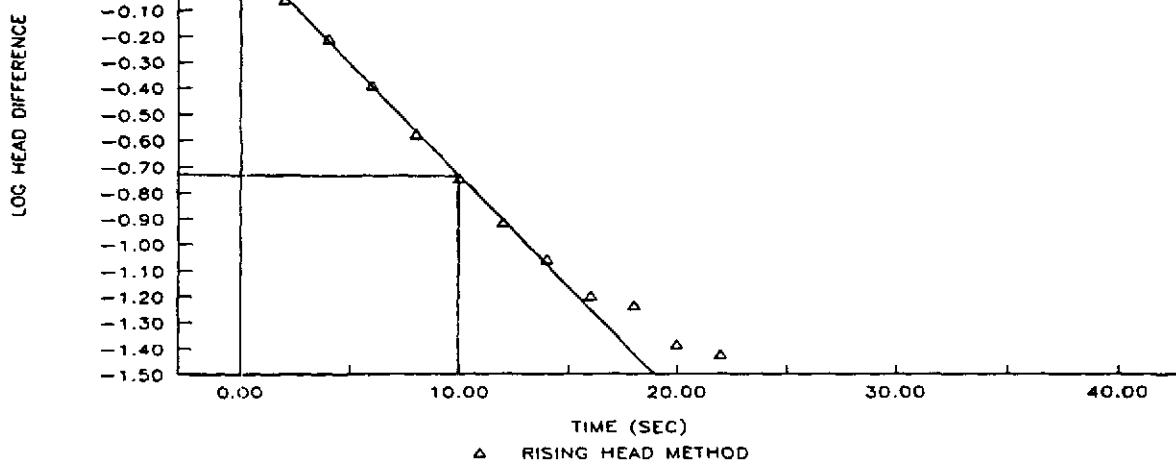
VARIABLE HEAD TEST

OW-14



VARIABLE HEAD TEST

OW-14



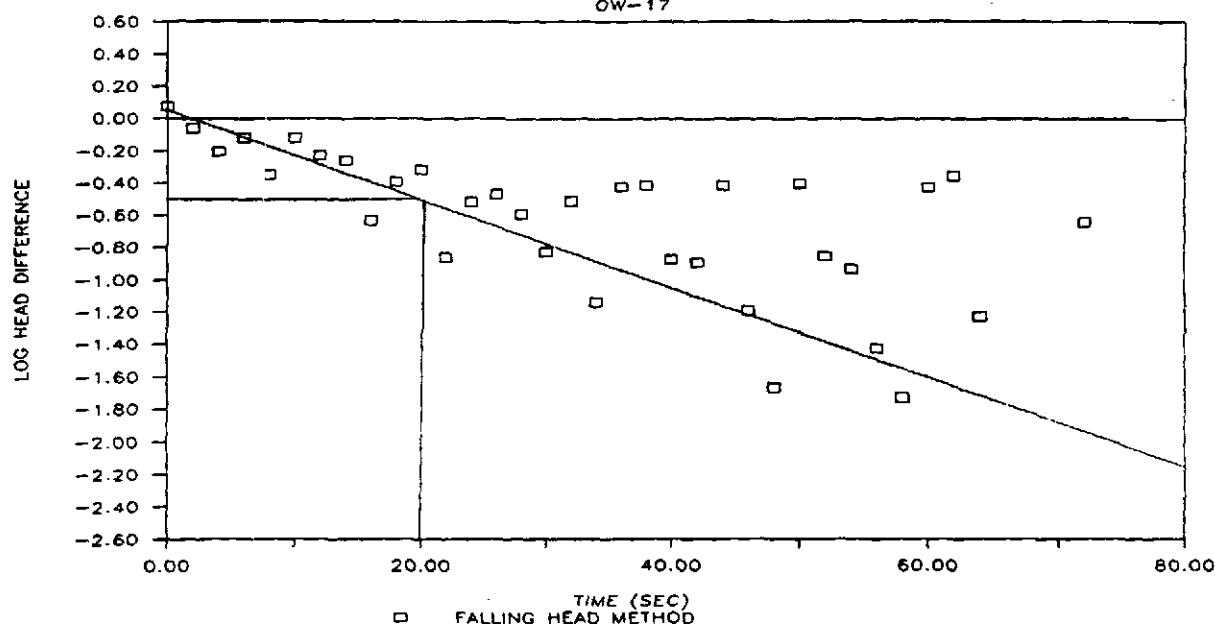
JOB NO:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO.:	MA01-327

WELL OW-14

BOUWER AND RICE ANALYSIS

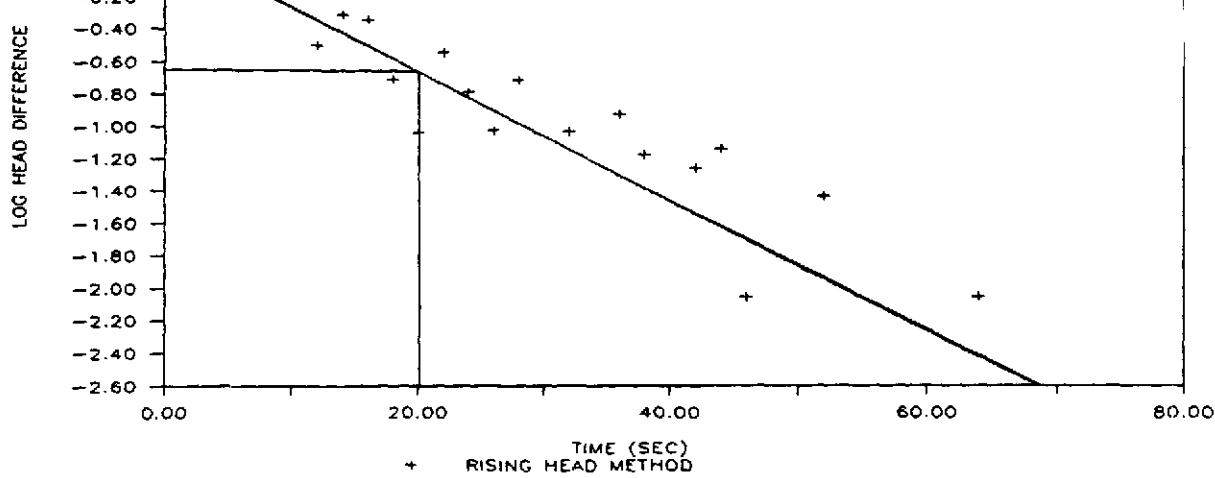
VARIABLE HEAD TEST

OW-17



VARIABLE HEAD TEST

OW-17

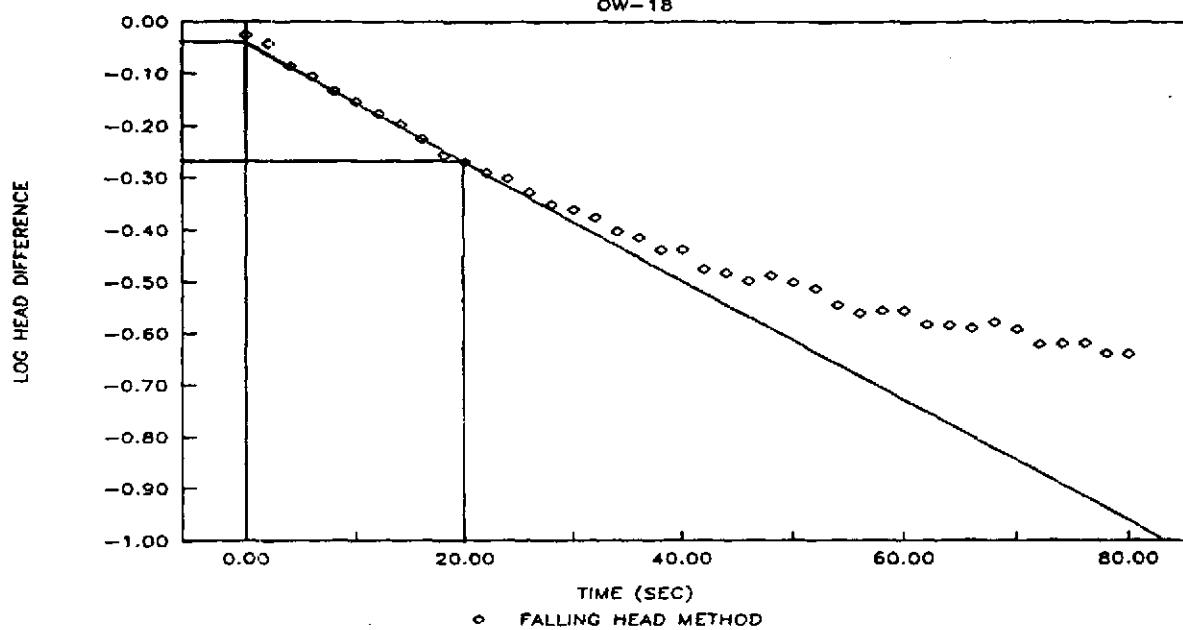


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No.:	MA01-328

WELL OW-17
BOUWER AND RICE ANALYSIS

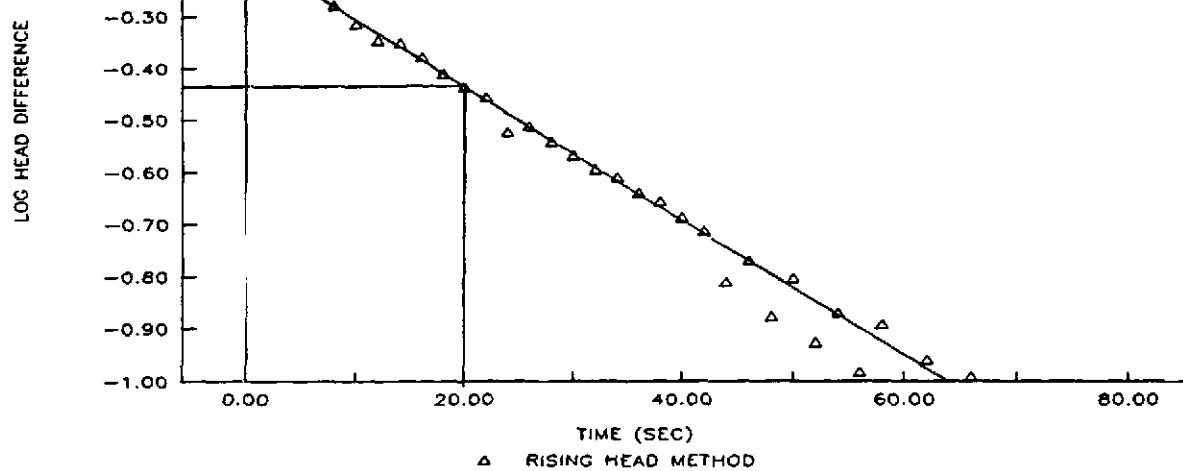
VARIABLE HEAD TEST

OW-18



VARIABLE HEAD TEST

OW-18



JOB NO.: 893-6255

SCALE: AS SHOWN

DRAWN:

FG

DATE: 11/21/90

CHECKED:

VB

DWG. NO.: MA01-329

WELL OW-18

BOUWER AND RICE ANALYSIS

Golder Associates

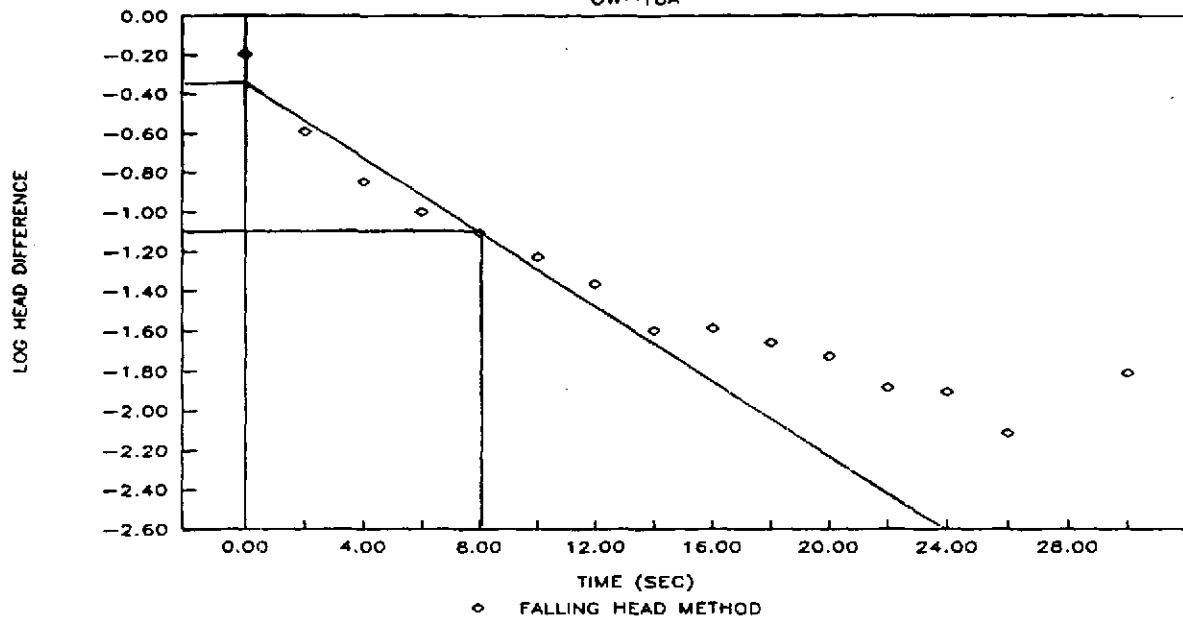
INDUSTRIPLEX SITE REMEDIAL TRUST

FIGURE

E6

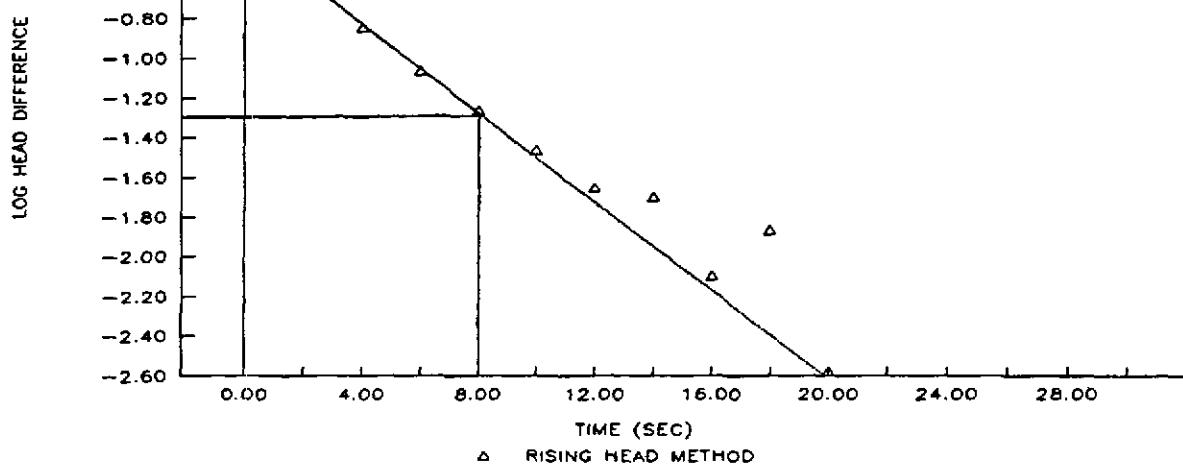
VARIABLE HEAD TEST

OW-18A



VARIABLE HEAD TEST

OW-18A



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN:

FG

DATE: 11/21/90

CHECKED:

VB

DWG. No.: MA01-330

WELL OW-18A

BOUWER AND RICE ANALYSIS

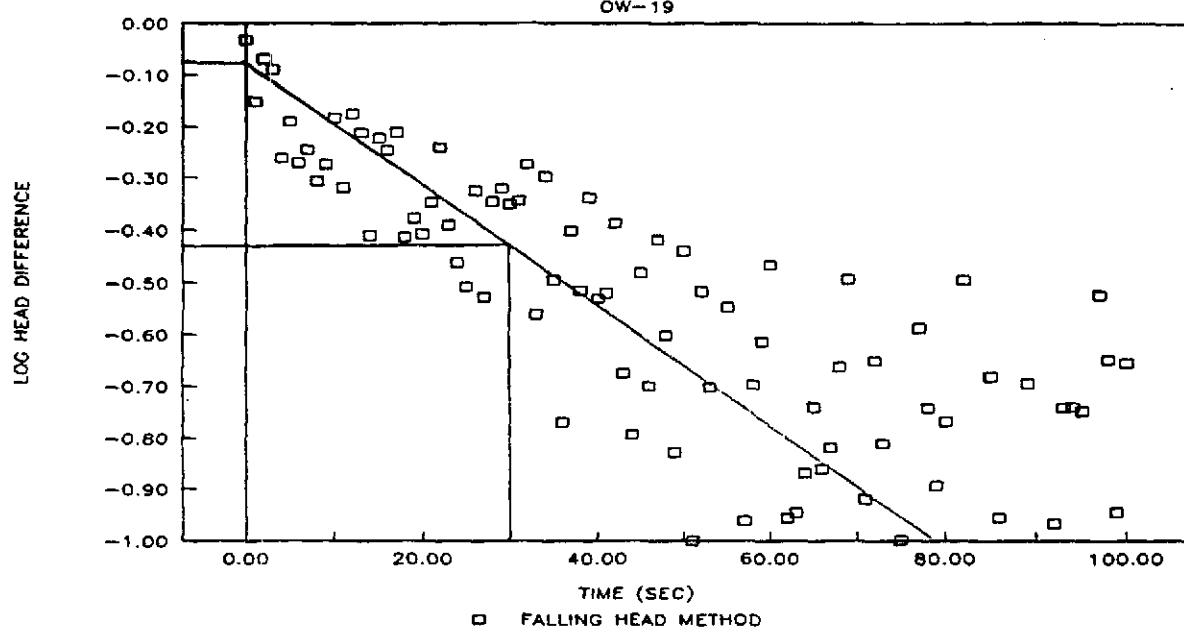
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE E7

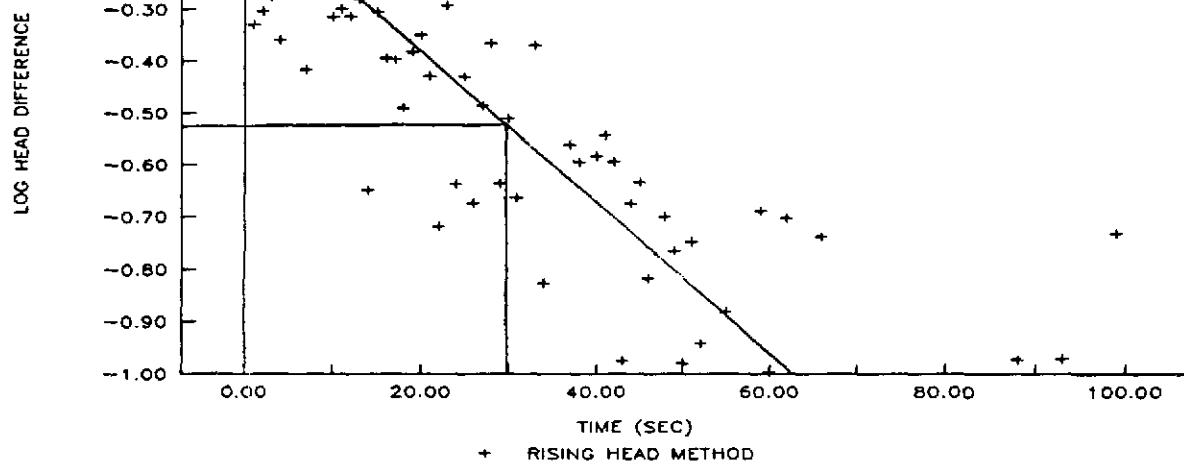
VARIABLE HEAD TEST

OW-19



VARIABLE HEAD TEST

OW-19



JOB No.: 893-6255 SCALE: AS SHOWN

DRAWN: FG DATE: 11/21/90

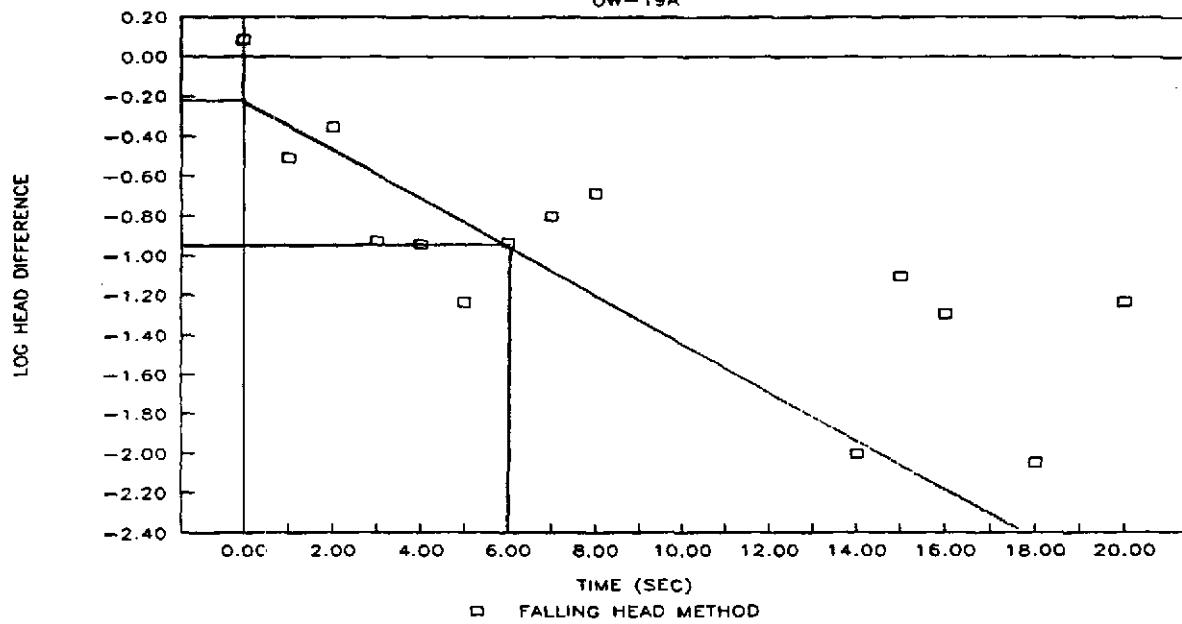
CHECKED: VB Dwg. No.: MA01-331

WELL OW-19

BOUWER AND RICE ANALYSIS

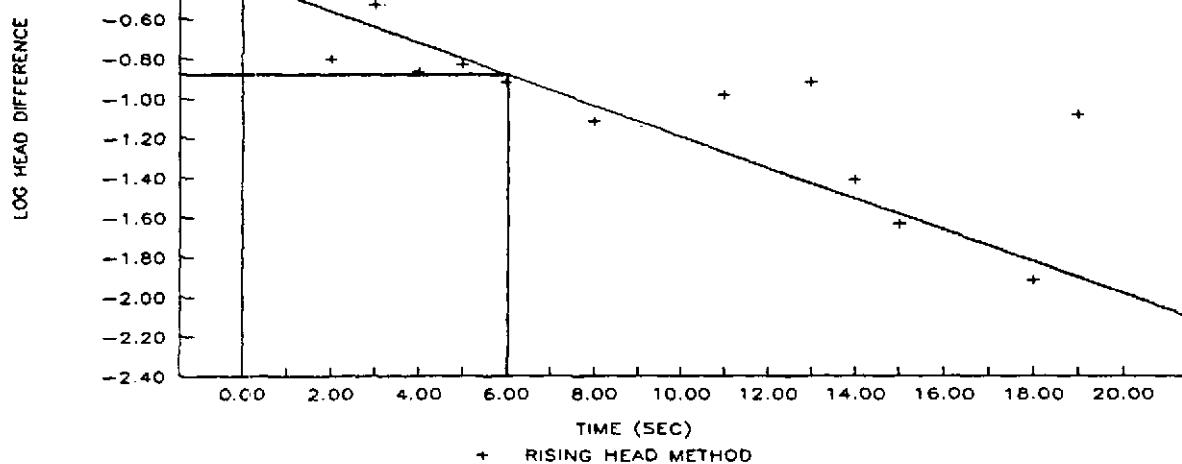
VARIABLE HEAD TEST

OW-19A



VARIABLE HEAD TEST

OW-19A



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

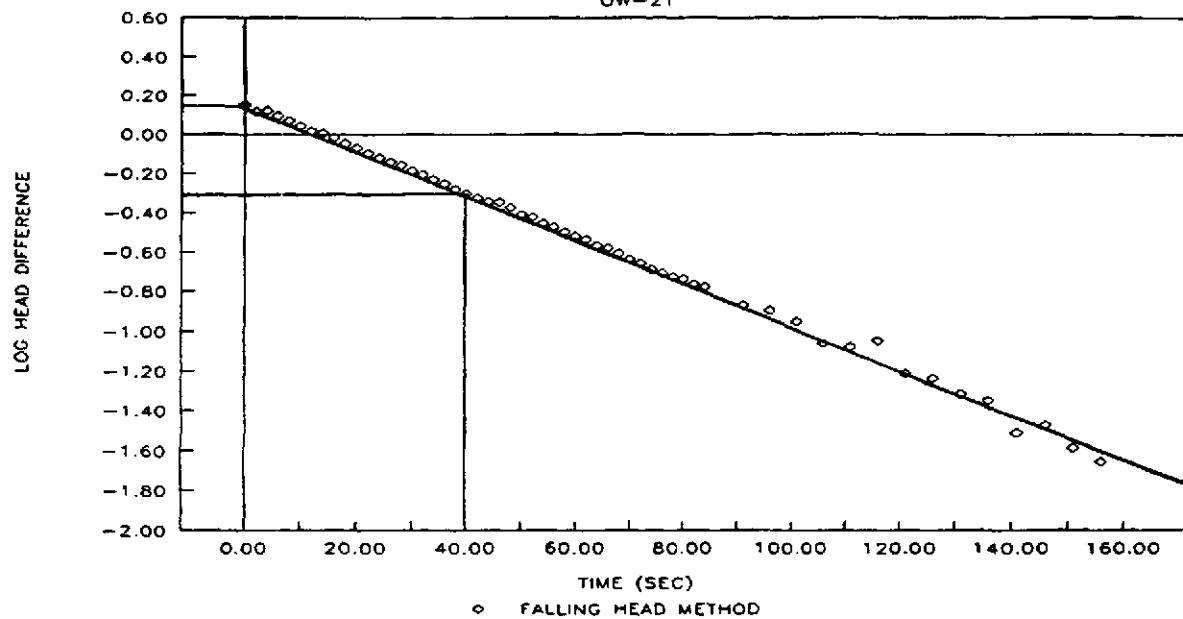
DWG. No.: MA01-332

WELL OW-19A

BOUWER AND RICE ANALYSIS

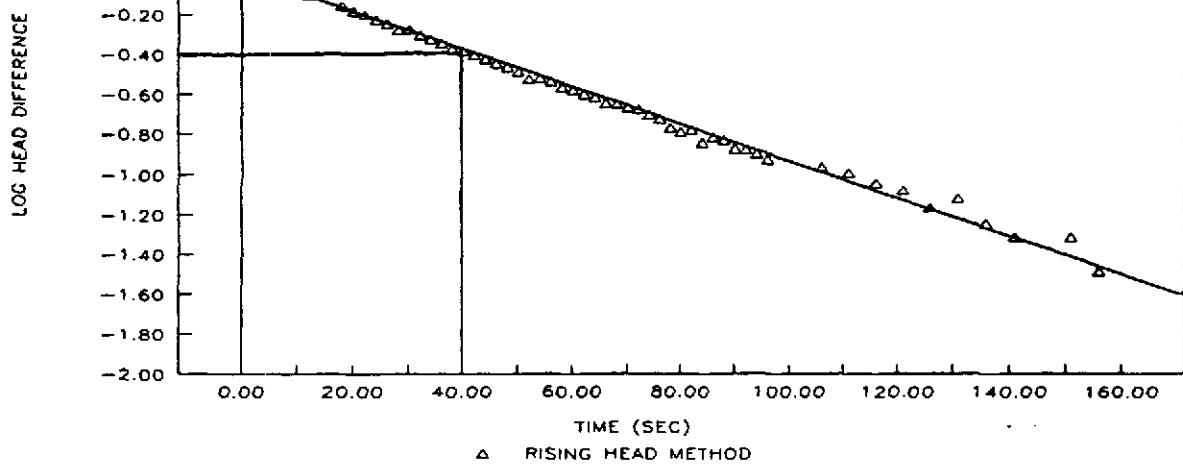
VARIABLE HEAD TEST

OW-21



VARIABLE HEAD TEST

OW-21



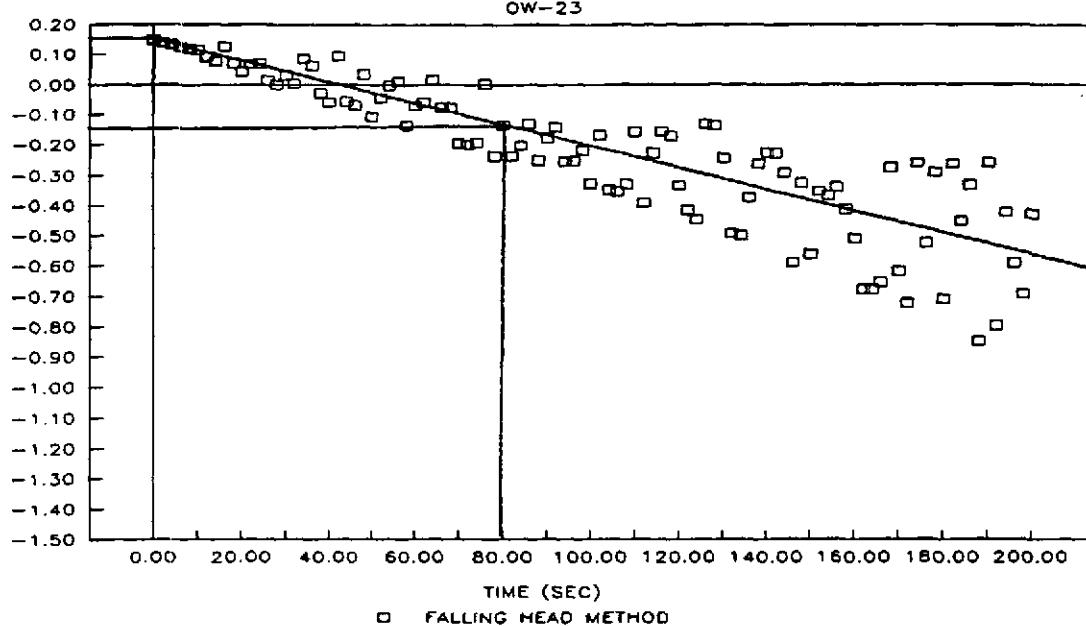
JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No.:	MA01-333

WELL OW-21
BOUWER AND RICE ANALYSIS

VARIABLE HEAD TEST

OW-23

LOG HEAD DIFFERENCE

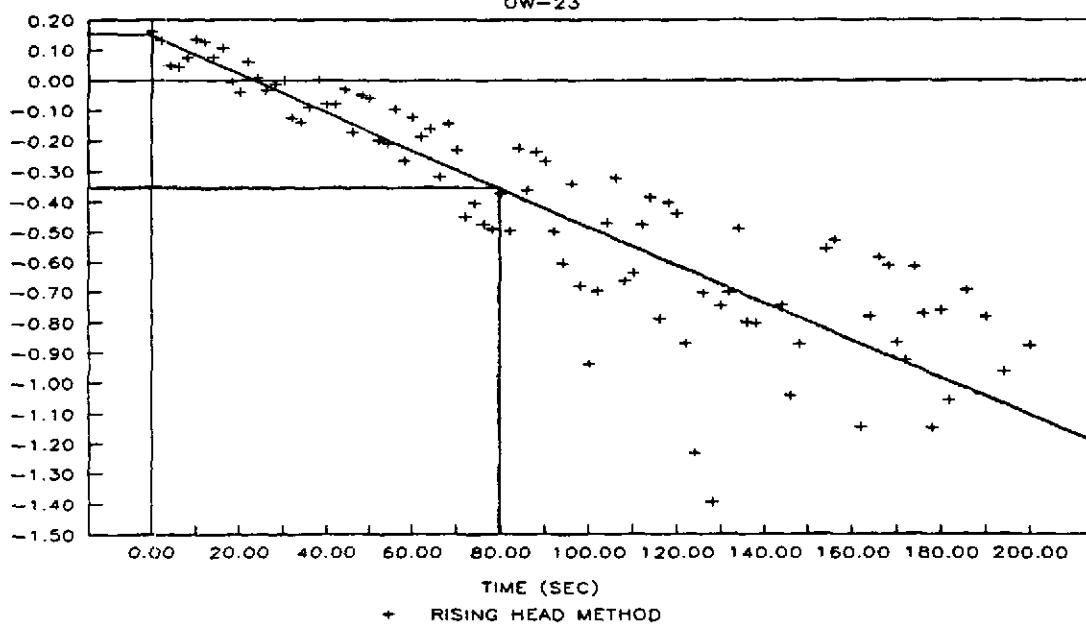


TIME (SEC)
□ FALLING HEAD METHOD

VARIABLE HEAD TEST

OW-23

LOG HEAD DIFFERENCE



TIME (SEC)
+ RISING HEAD METHOD

JOB No.: 893-6255

SCALE:

AS SHOWN

DRAWN:

FG

DATE:

11/21/90

CHECKED:

VB

DWG. No.:

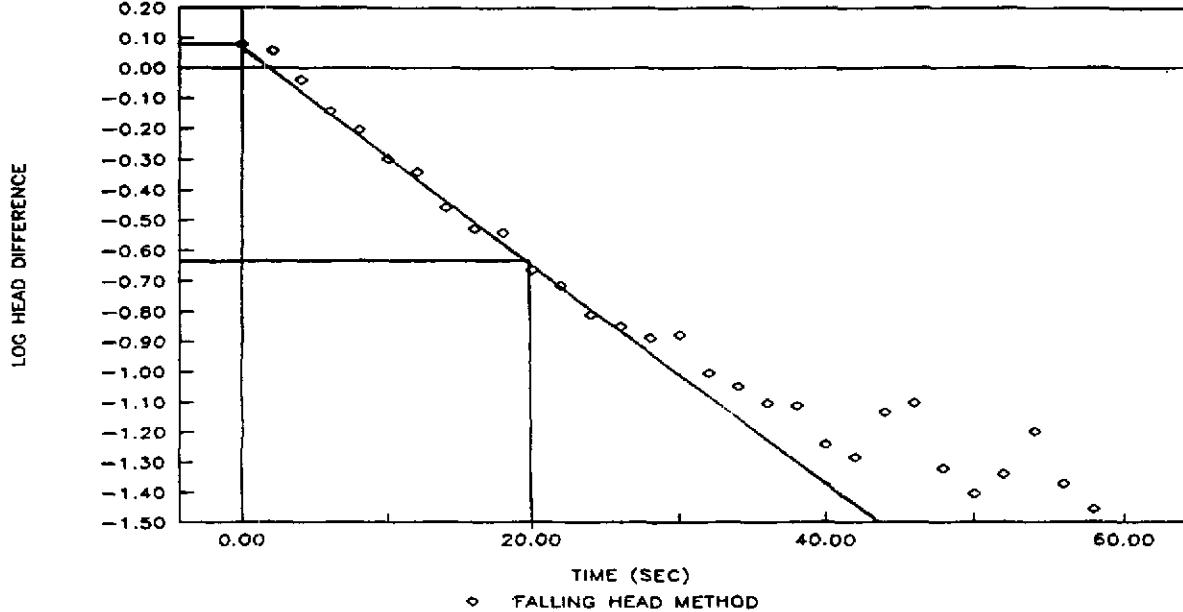
MA01-334

WELL OW-23

BOUWER AND RICE ANALYSIS

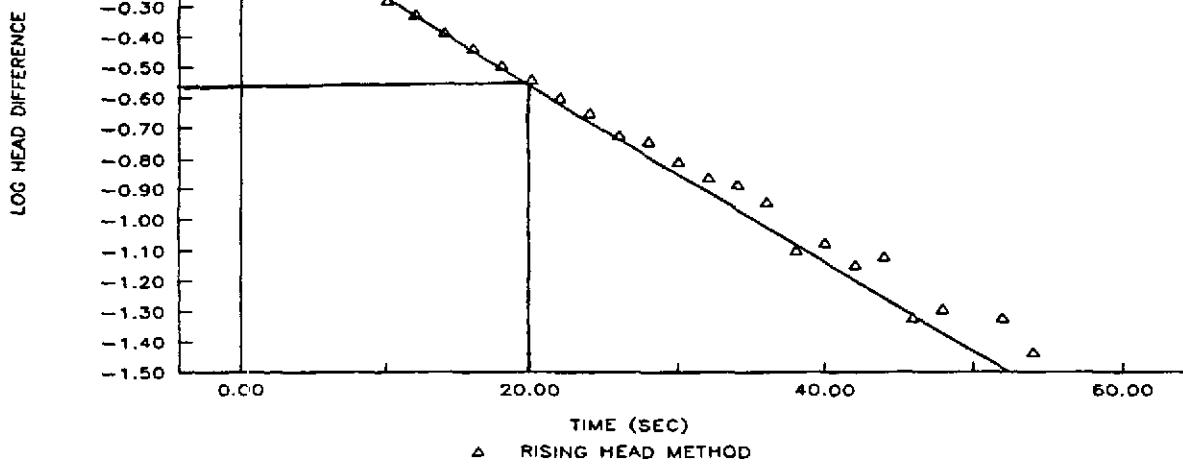
VARIABLE HEAD TEST

OW-30A



VARIABLE HEAD TEST

OW-30A



JOB No.:

893-6255

SCALE:

AS SHOWN

DRAWN:

FG

DATE:

11/21/90

CHECKED:

V8

DWG. No.:

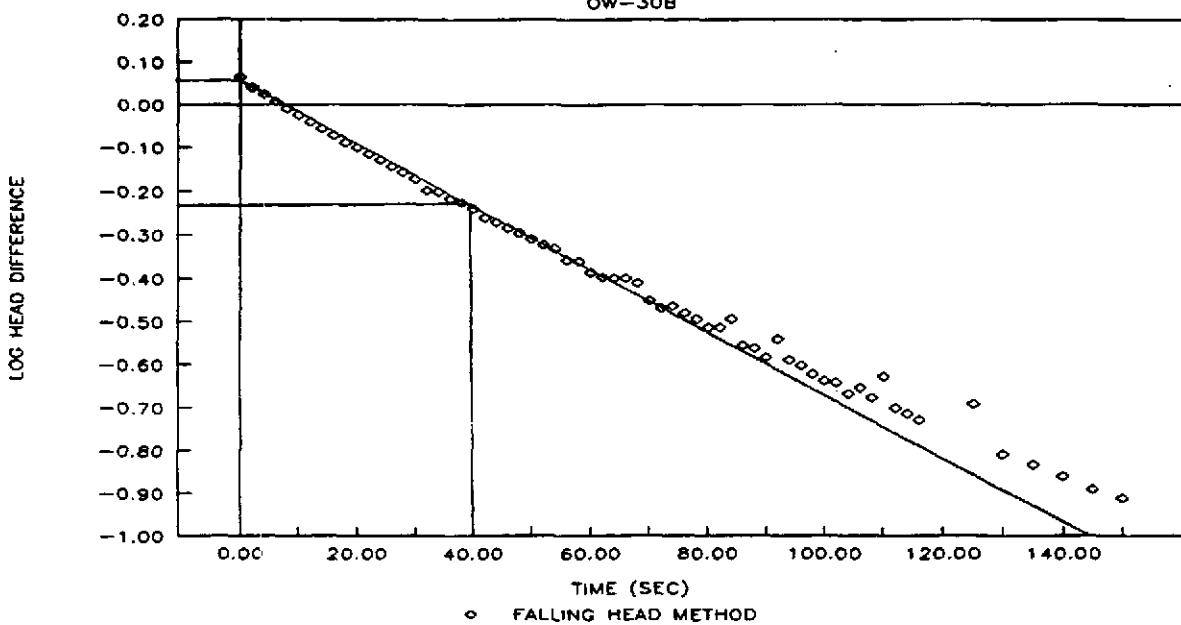
MA01-335

WELL OW-30A

BOUWER AND RICE ANALYSIS

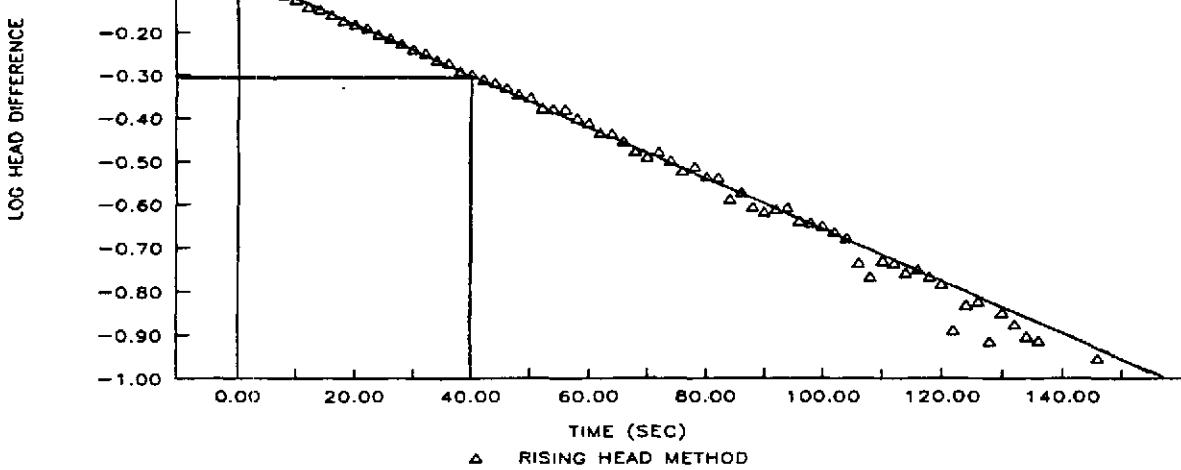
VARIABLE HEAD TEST

OW-30B



VARIABLE HEAD TEST

OW-30B



JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	<i>VB</i>	DWG. No.:	MA01-336

Golder Associates

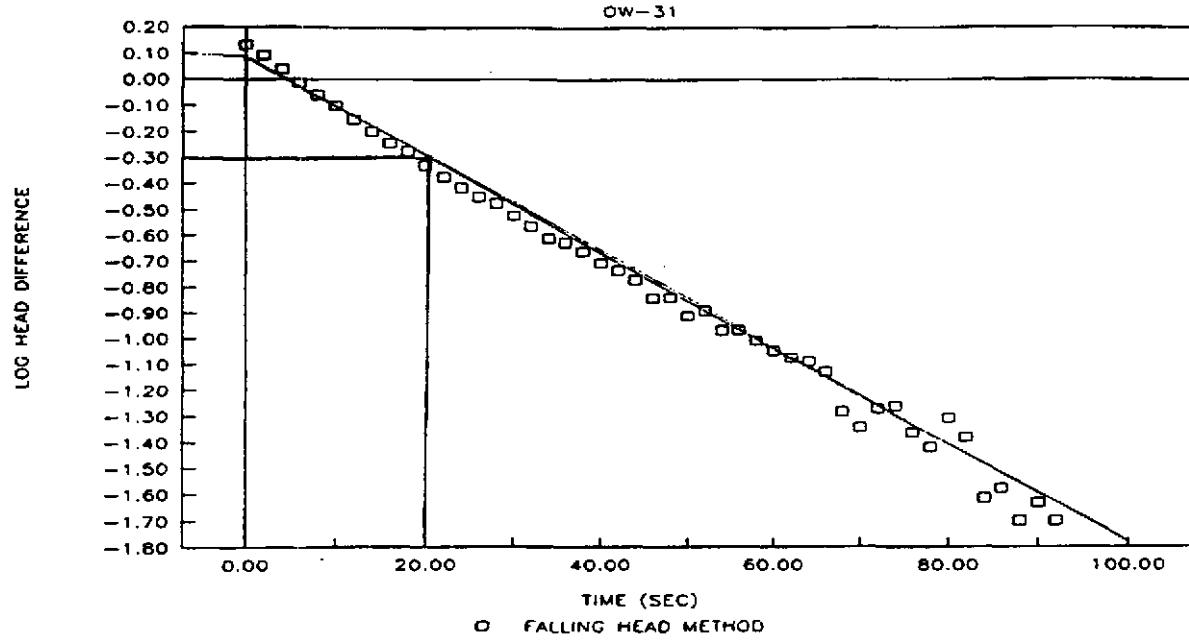
WELL OW-30B
BOUWER AND RICE ANALYSIS

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE E13

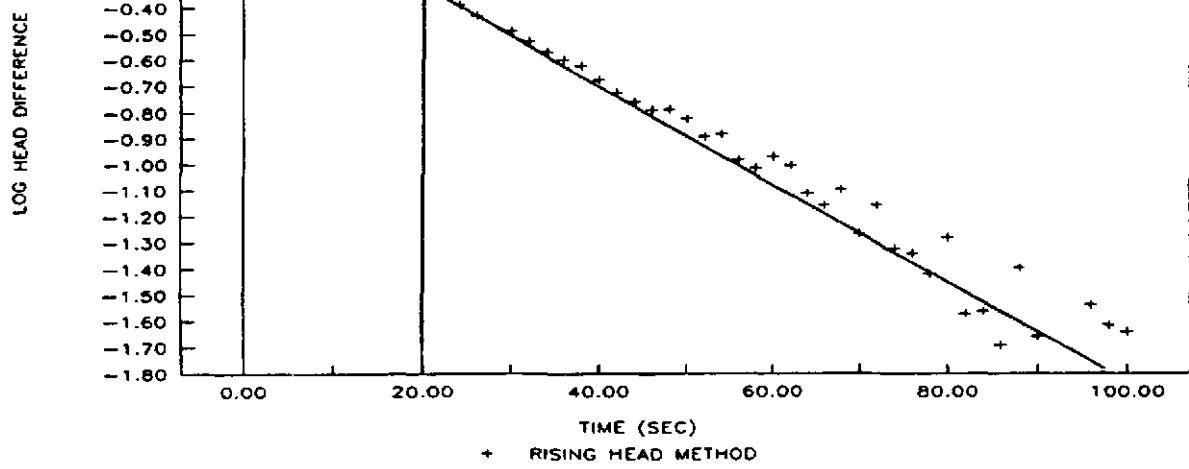
VARIABLE HEAD TEST

OW-31



VARIABLE HEAD TEST

OW-31

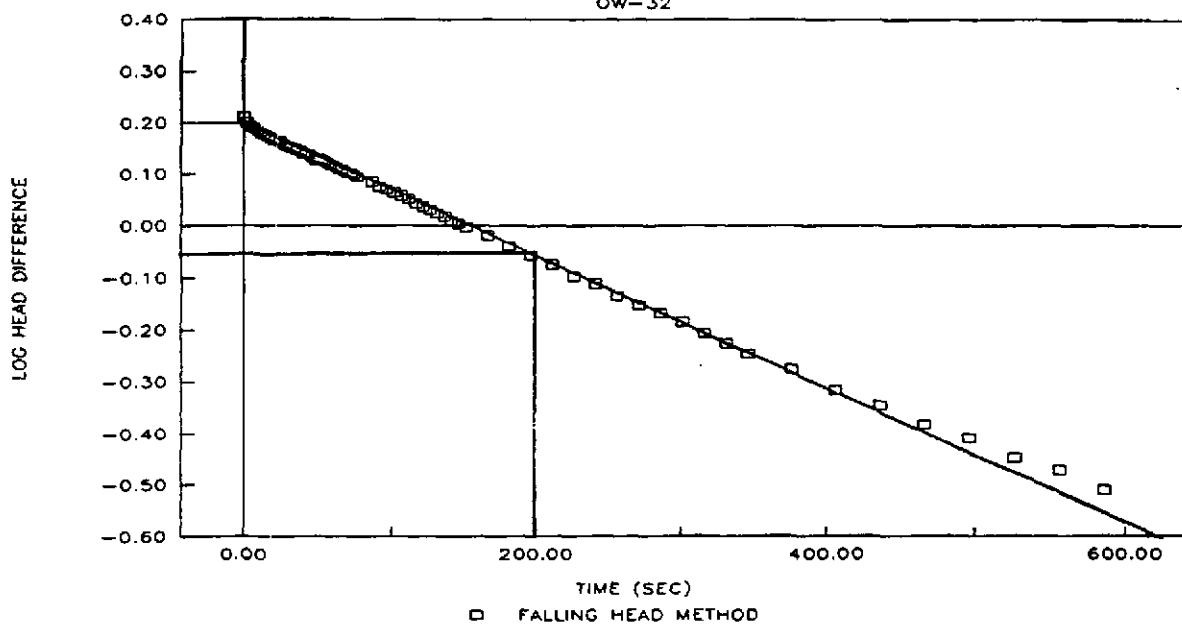


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DRW. NO.:	MA01-337

WELL OW-31
BOUWER AND RICE ANALYSIS

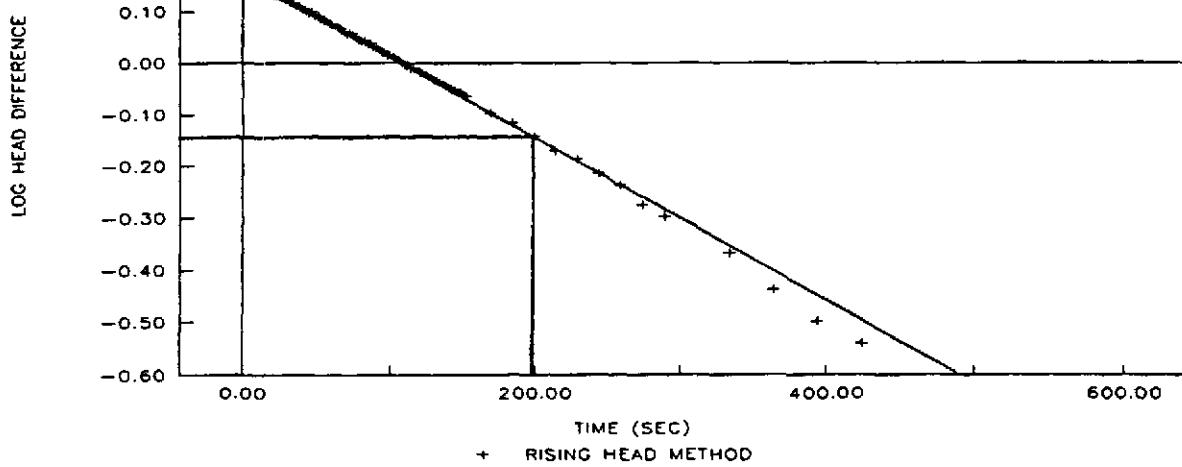
VARIABLE HEAD TEST

OW-32



VARIABLE HEAD TEST

OW-32

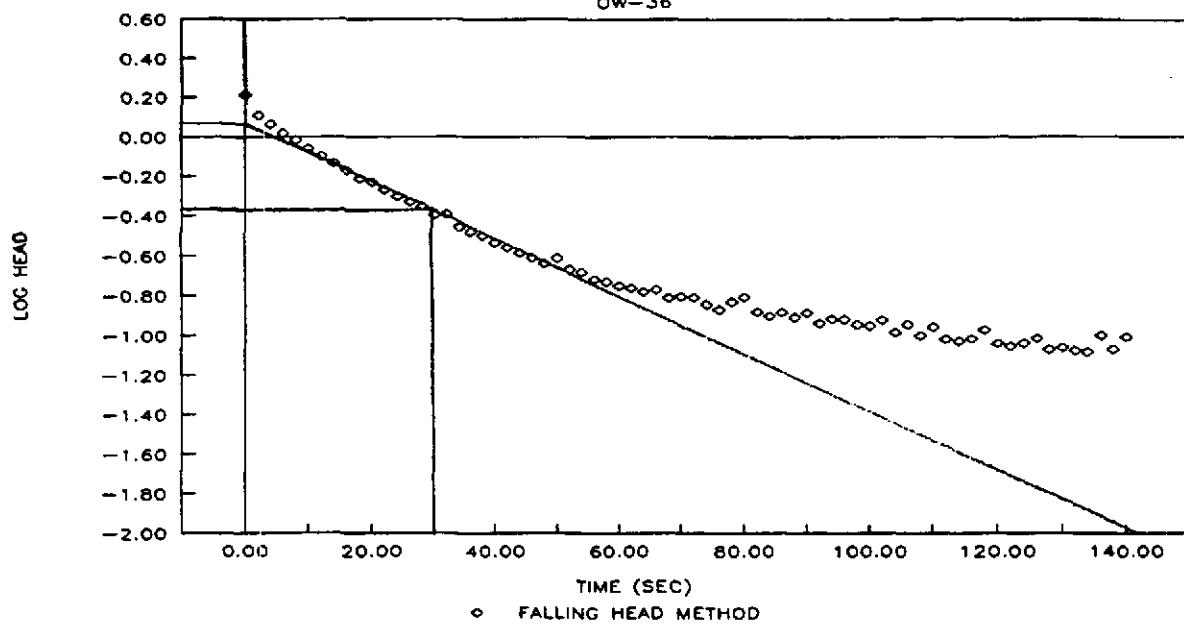


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VS	DRG. No.:	MA01-338

WELL OW-32
BOUWER AND RICE ANALYSIS

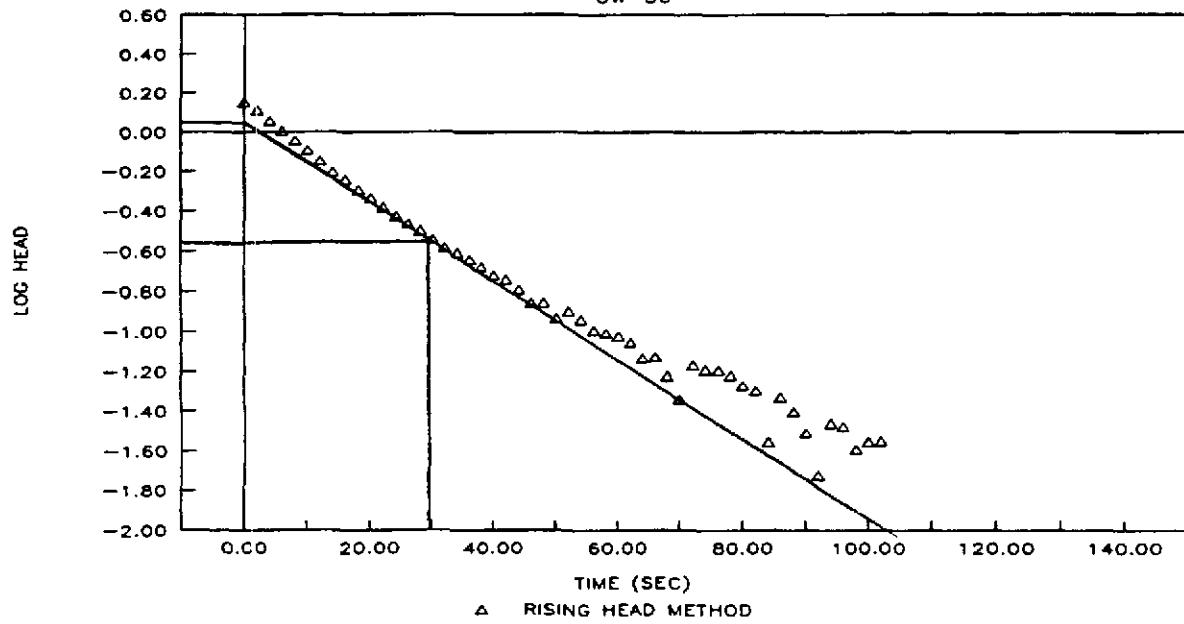
VARIABLE HEAD TEST

OW-36



VARIABLE HEAD TEST

OW-36



JOB NO: 893-6255 SCALE: AS SHOWN

DRAWN: FG DATE: 11/21/90

CHECKED: VB DWG. NO: MA01-339

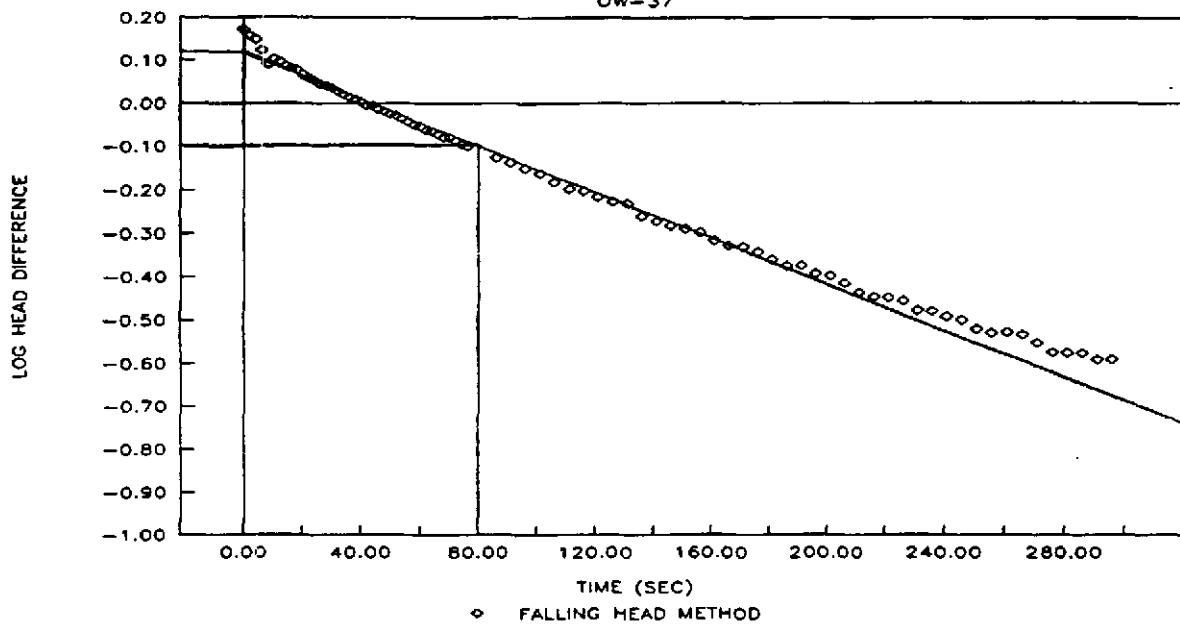
WELL OW-36

BOUWER AND RICE ANALYSIS

FIGURE F16

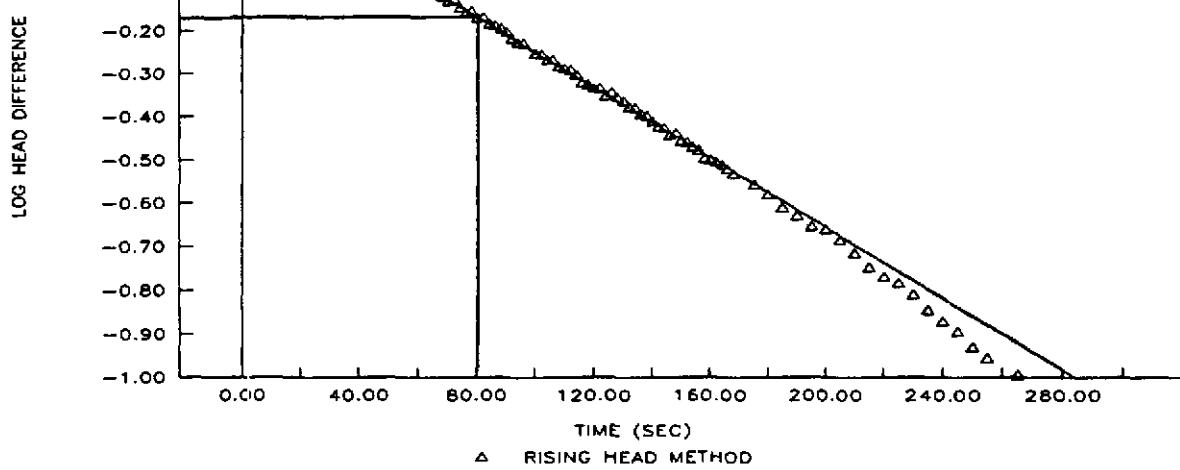
VARIABLE HEAD TEST

OW-37



VARIABLE HEAD TEST

OW-37



JOB No: 893-6255 SCALE: AS SHOWN

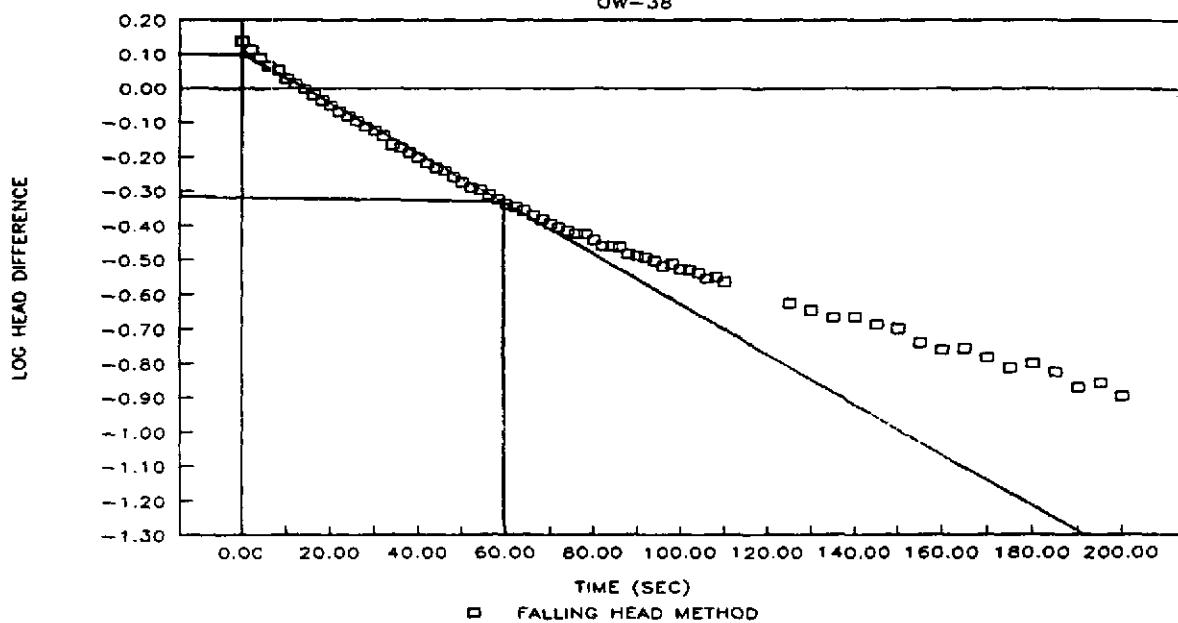
DRAWN: FG DATE: 11/21/90

CHECKED: VB DWG. NO: MA01-340

WELL OW-37
BOUWER AND RICE ANALYSIS

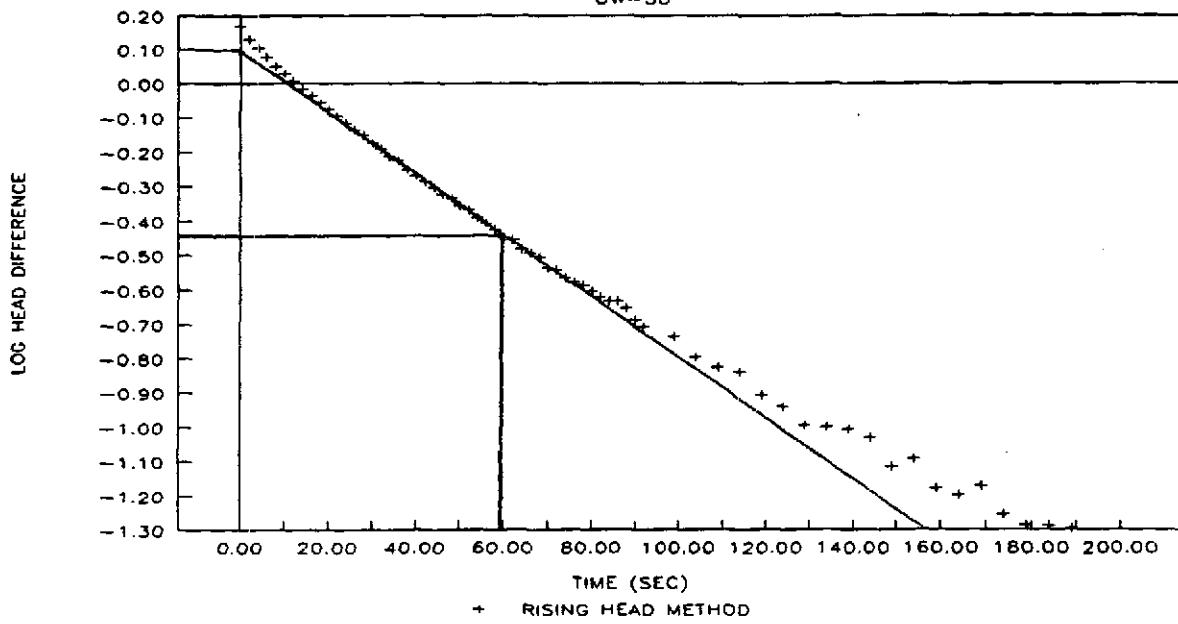
VARIABLE HEAD TEST

OW-38



VARIABLE HEAD TEST

OW-38



JOB No.: 893-6255

SCALE AS SHOWN

DRAWN:

FG

DATE

11/21/90

CHECKED:

VB

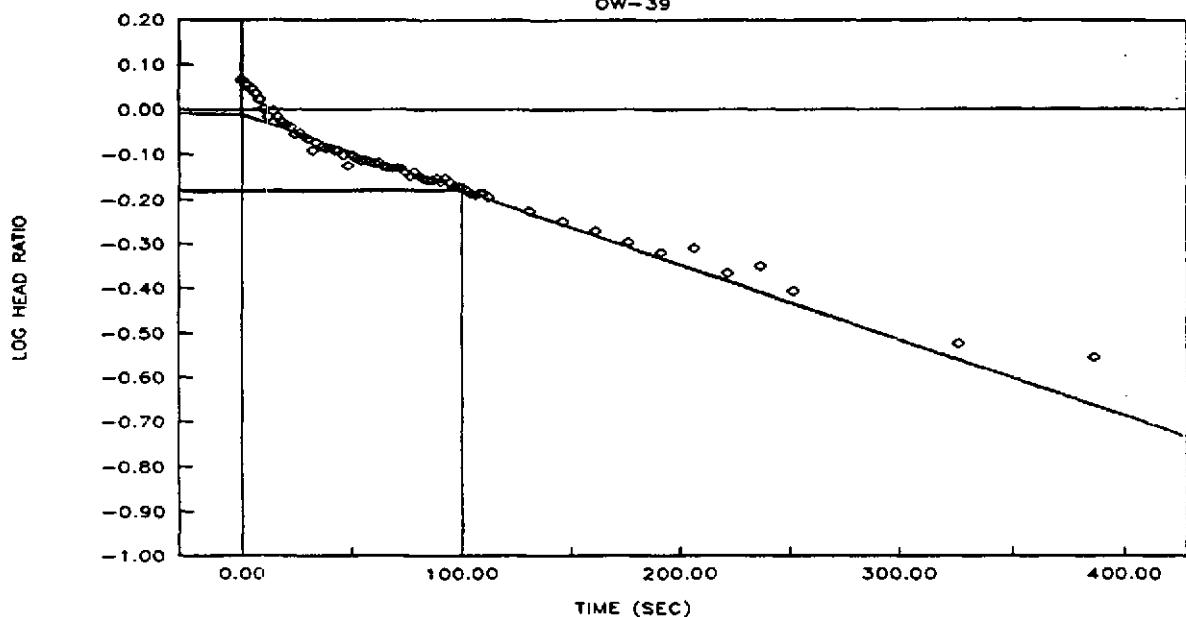
DWG. No.: MA01-341

WELL OW-38

BOUWER AND RICE ANALYSIS

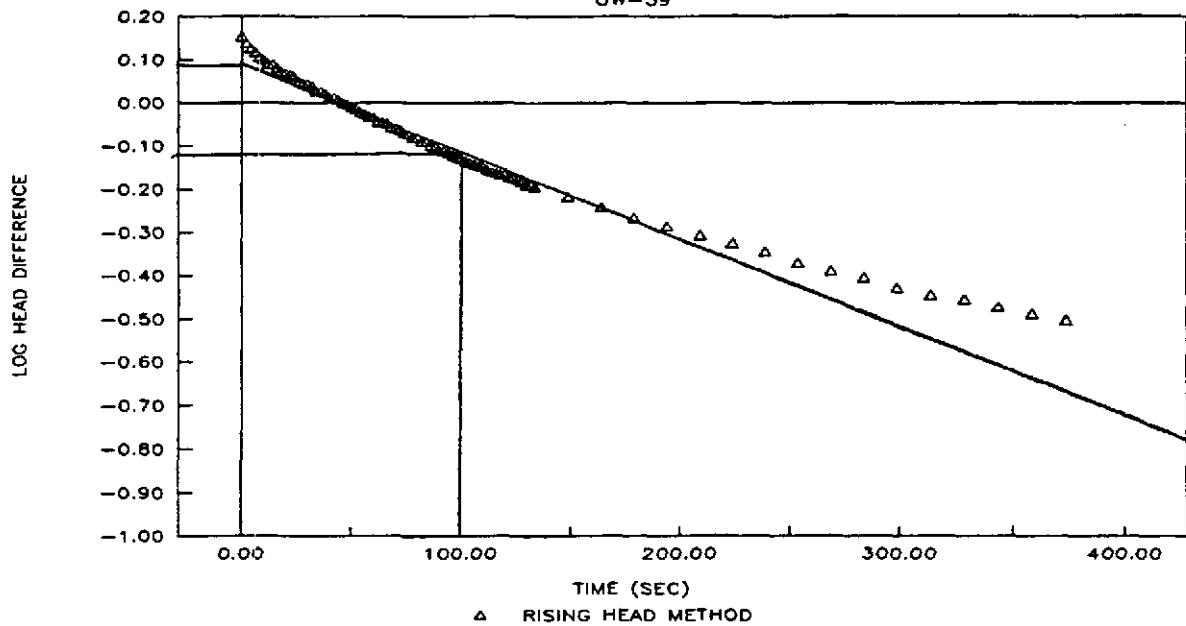
VARIABLE HEAD TEST

OW-39



VARIABLE HEAD TEST

OW-39



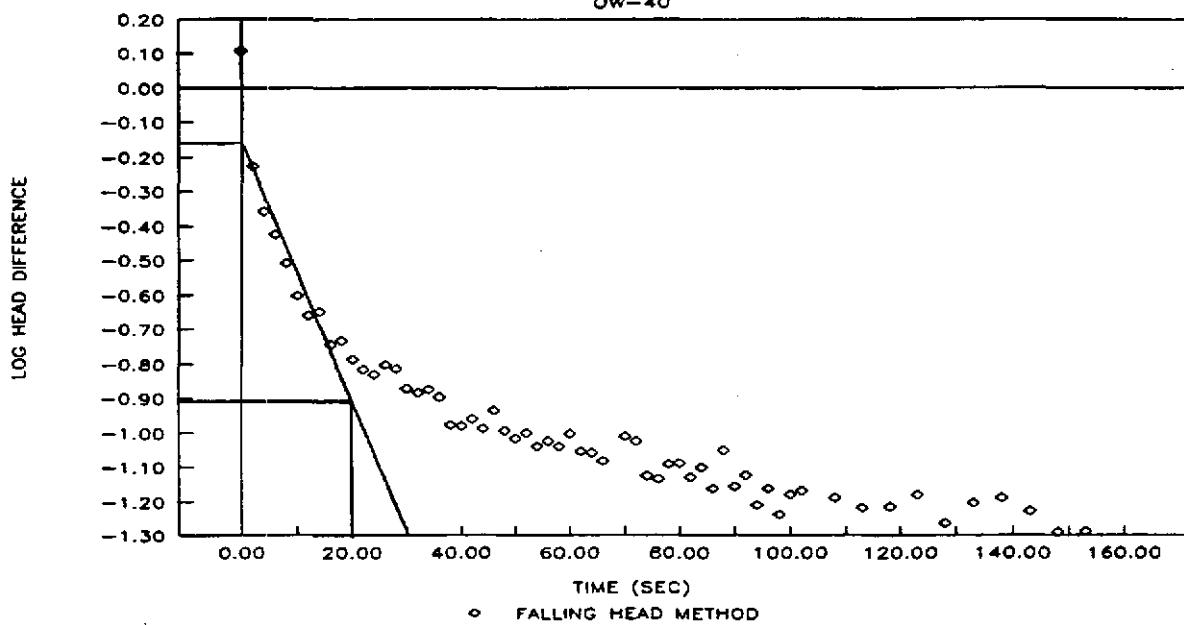
△ RISING HEAD METHOD

JOB NO:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO.:	MA01-342

WELL OW-39
BOUWER AND RICE ANALYSIS

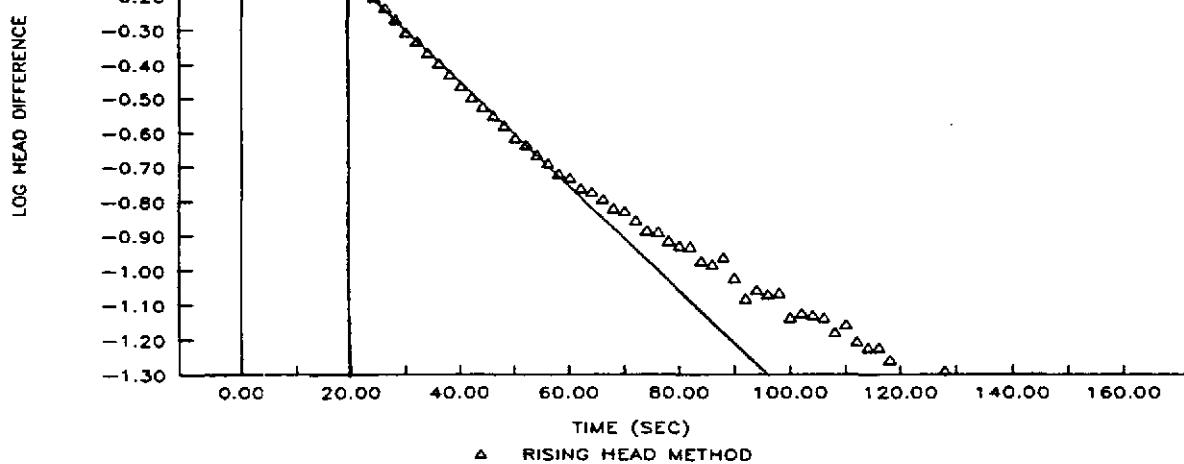
VARIABLE HEAD TEST

OW-40



VARIABLE HEAD TEST

OW-40

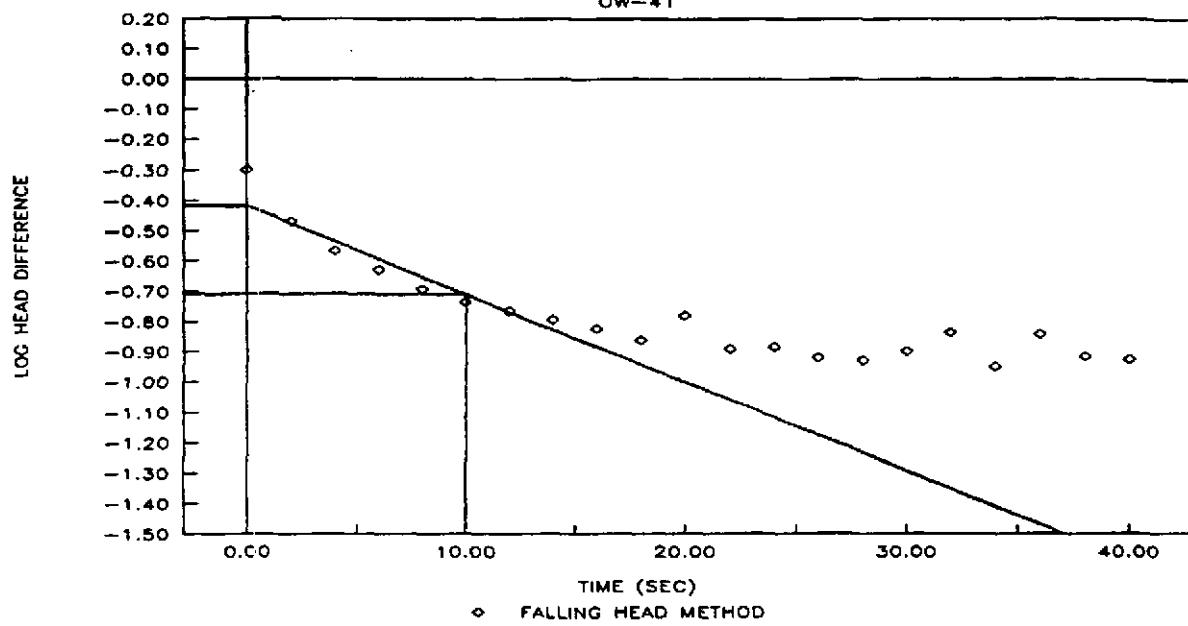


JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No.:	MA01-343

WELL OW-40
BOUWER AND RICE ANALYSIS

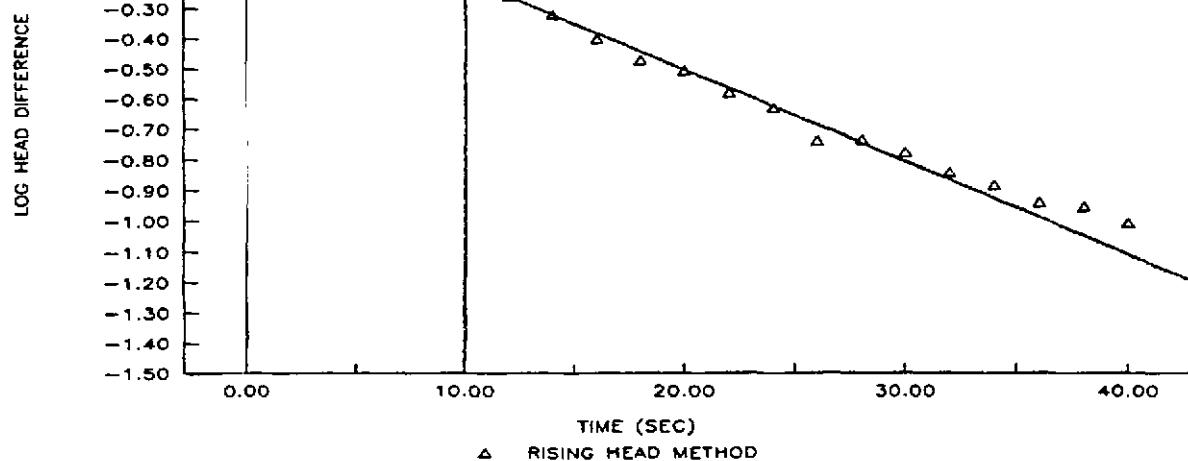
VARIABLE HEAD TEST

OW-41



VARIABLE HEAD TEST

OW-41



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

DWG. No.: MA01-344

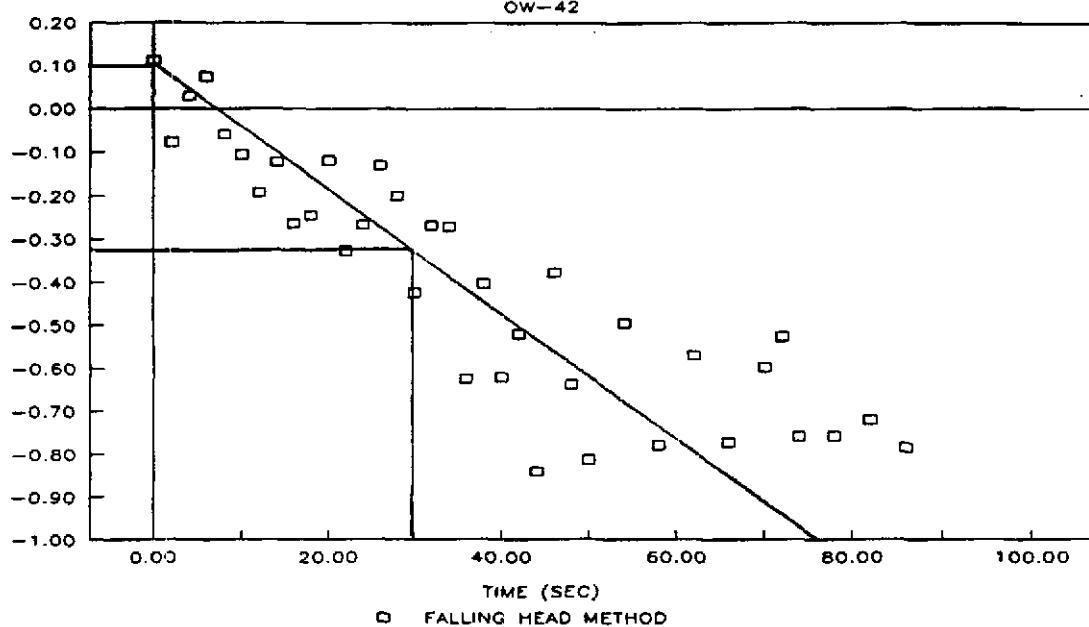
WELL OW-41

BOUWER AND RICE ANALYSIS

VARIABLE HEAD TEST

OW-42

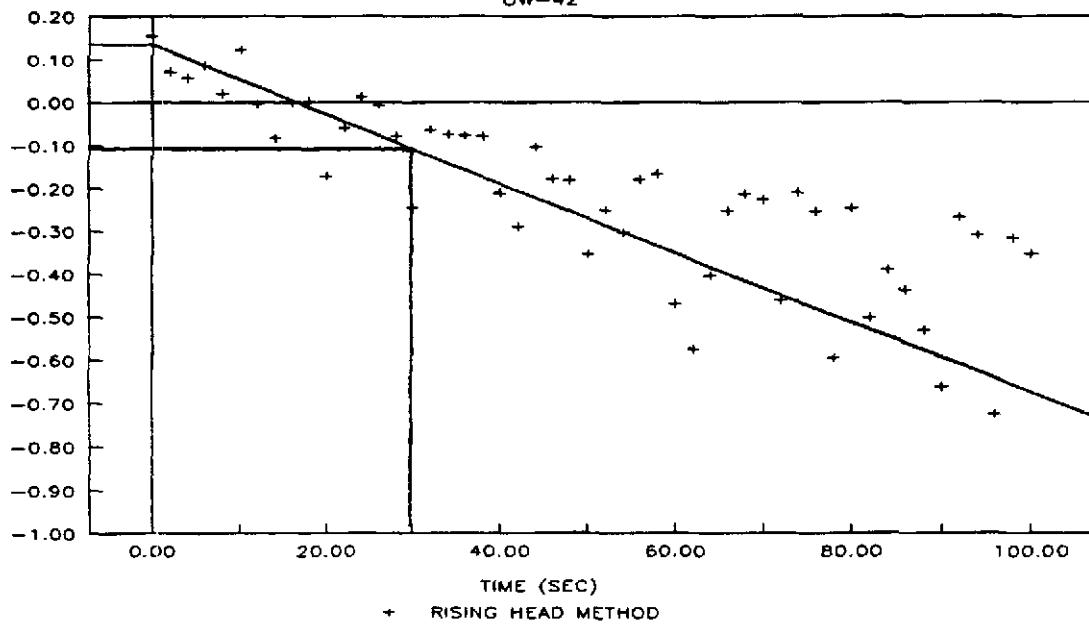
LOG HEAD DIFFERENCE



VARIABLE HEAD TEST

OW-42

LOG HEAD DIFFERENCE



JOB No.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

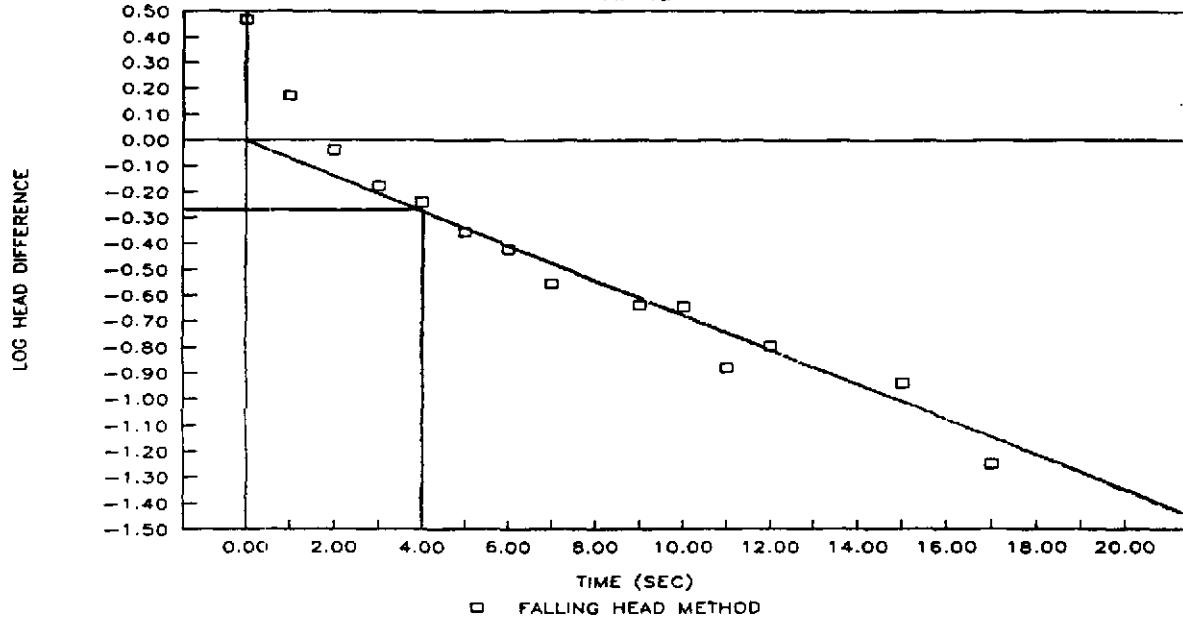
DWG. No.: MA01-345

WELL OW-42

BOUWER AND RICE ANALYSIS

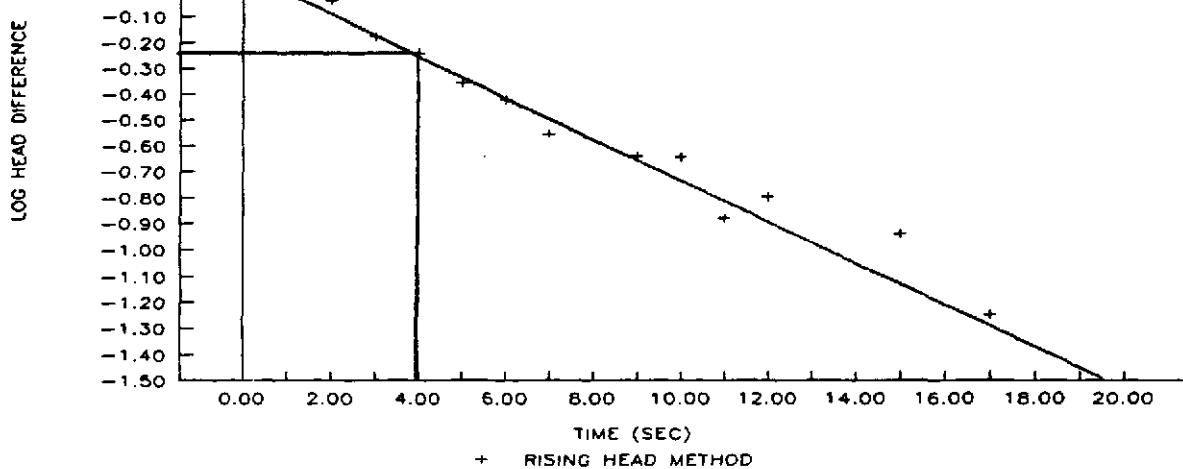
VARIABLE HEAD TEST

TW-1D



VARIABLE HEAD TEST

TW-1D



JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No.:	MA01-346

WELL TW-1D

BOUWER AND RICE ANALYSIS

Golder Associates

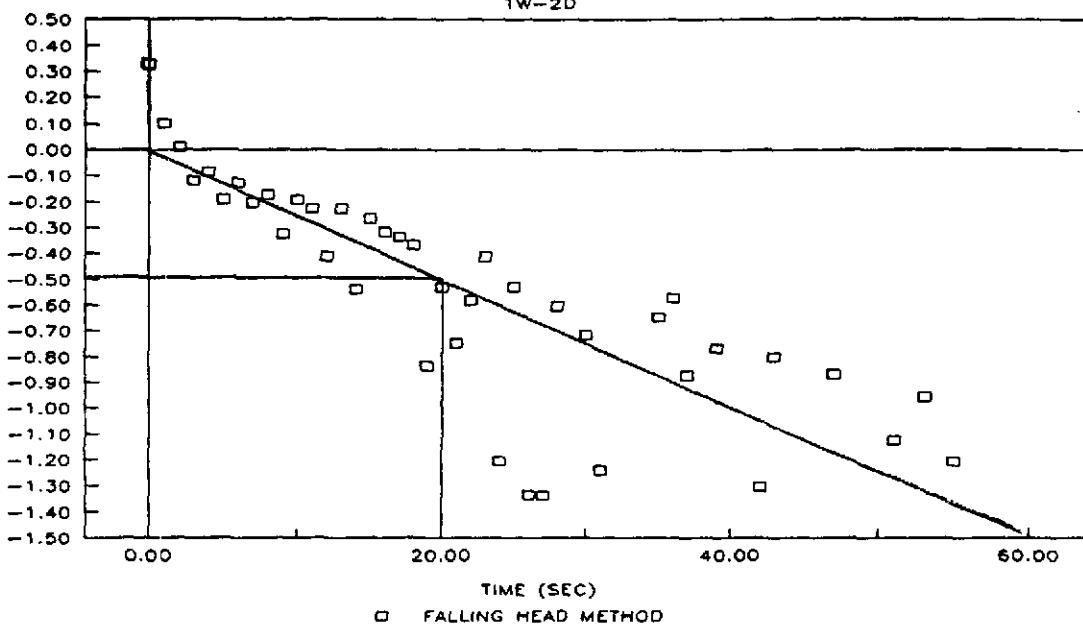
INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE E23

VARIABLE HEAD TEST

TW-2D

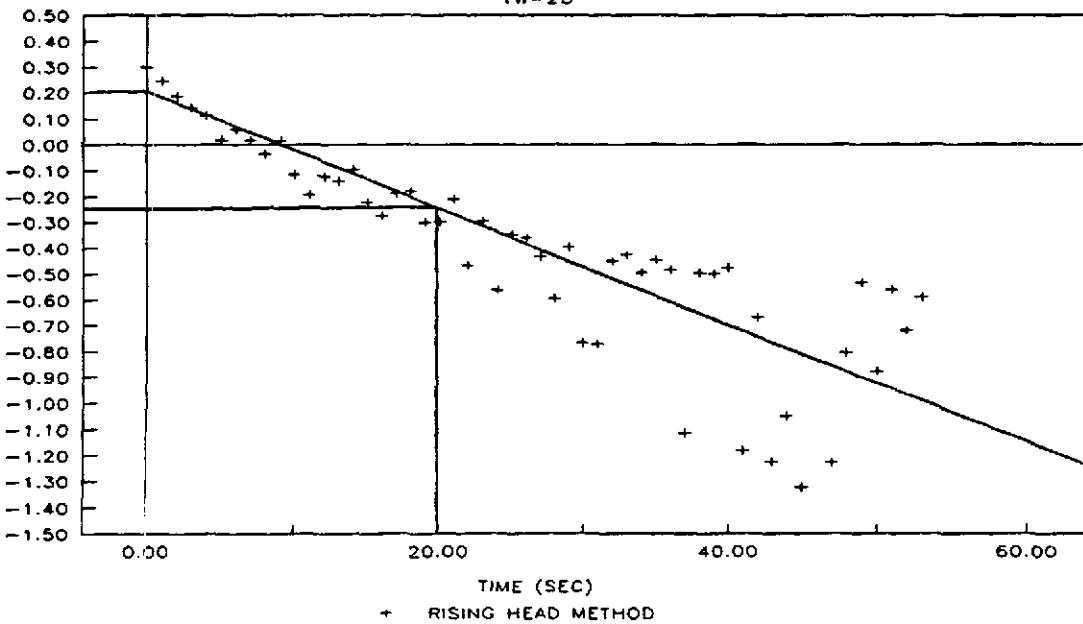
LOG HEAD DIFFERENCE



VARIABLE HEAD TEST

TW-2D

LOG HEAD DIFFERENCE



JOB NO.: 893-6255

SCALE: AS SHOWN

DRAWN: FG

DATE: 11/21/90

CHECKED: VB

DWG. NO.: MA01-347

WELL TW-2D

BOUWER AND RICE ANALYSIS

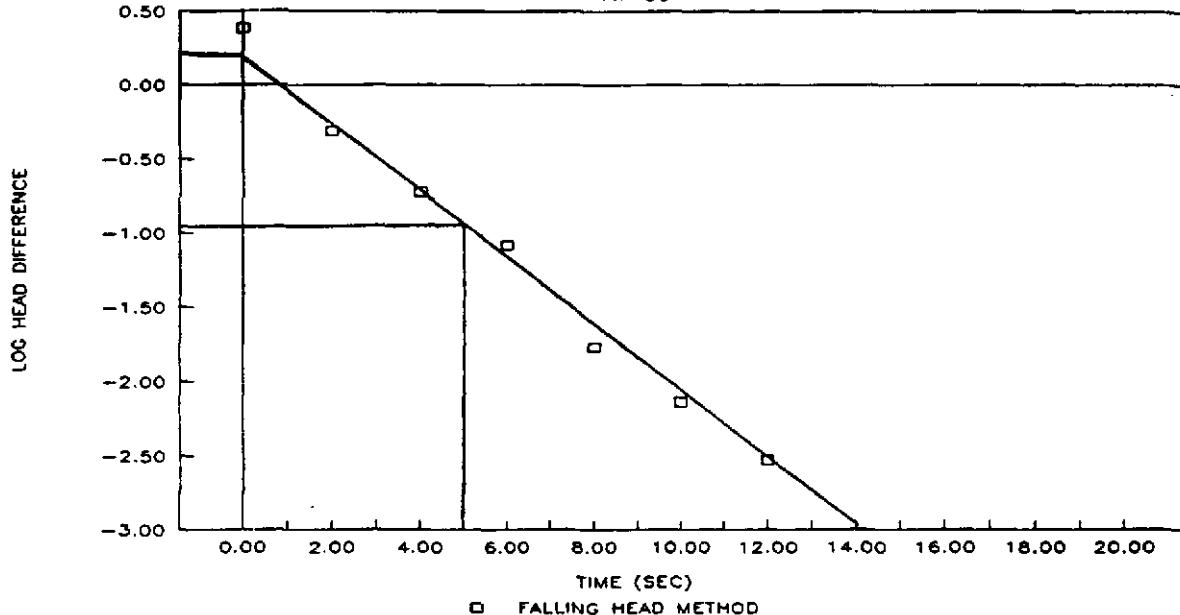
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE E24

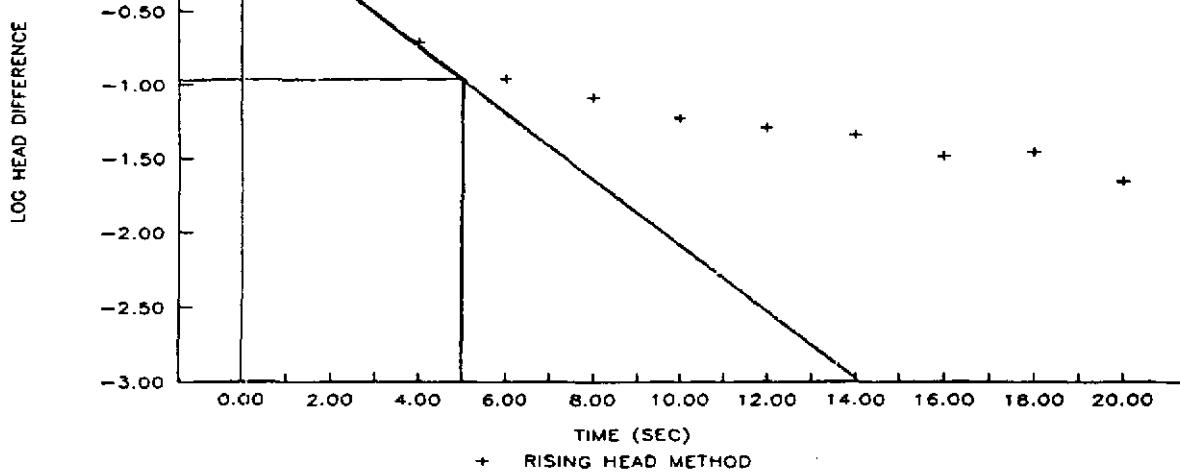
VARIABLE HEAD TEST

TW-3S



VARIABLE HEAD TEST

TW-3S



JOB No.: 893-6255 SCALE: AS SHOWN
 DRAWN: FG DATE: 11/21/90
 CHECKED: VB DWG. No.: MA01-349

WELL TW-3S
 BOUWER AND RICE ANALYSIS

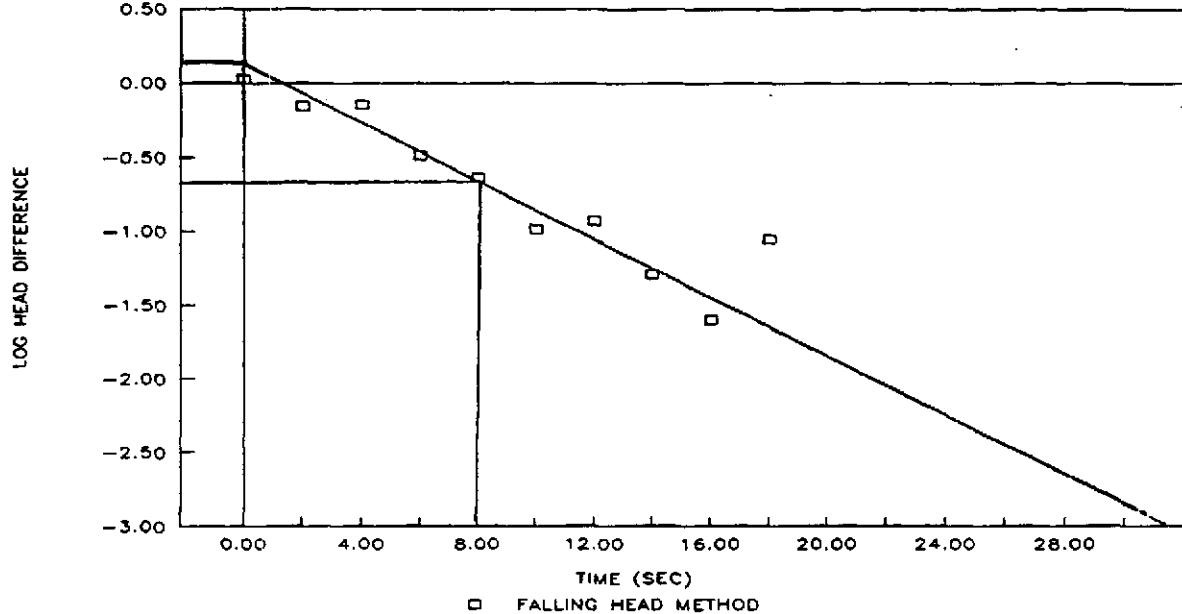
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE E25

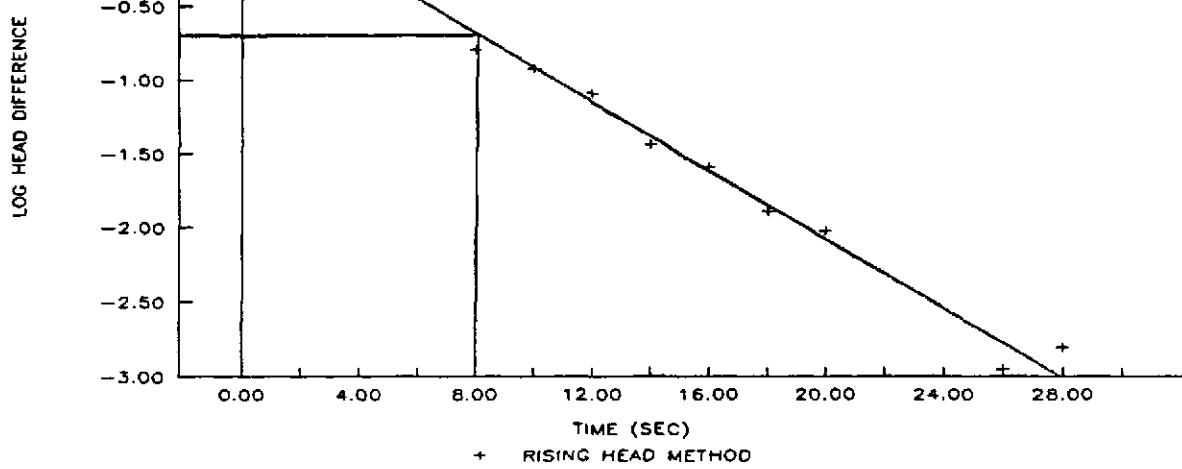
VARIABLE HEAD TEST

TW-3D



VARIABLE HEAD TEST

TW-3D



JOB NO:

893-6255

SCALE: AS SHOWN

DRAWN:

FG

DATE: 11/21/90

CHECKED:

VB

DWG. NO: MA01-348

WELL TW-3D

BOUWER AND RICE ANALYSIS

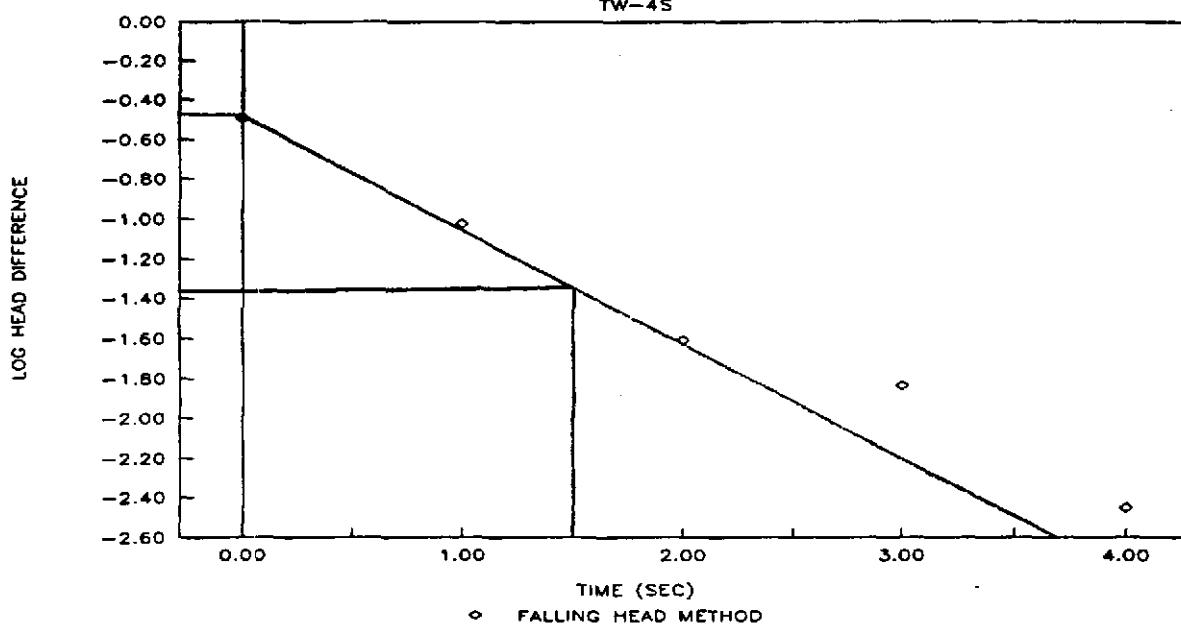
Golder Associates

INDUSTRI-PLEX SITE REMEDIAL TRUST

FIGURE E26

VARIABLE HEAD TEST

TW-4S



JOB No.:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. No.:	MA01-351

WELL TW-4S
BOUWER AND RICE ANALYSIS

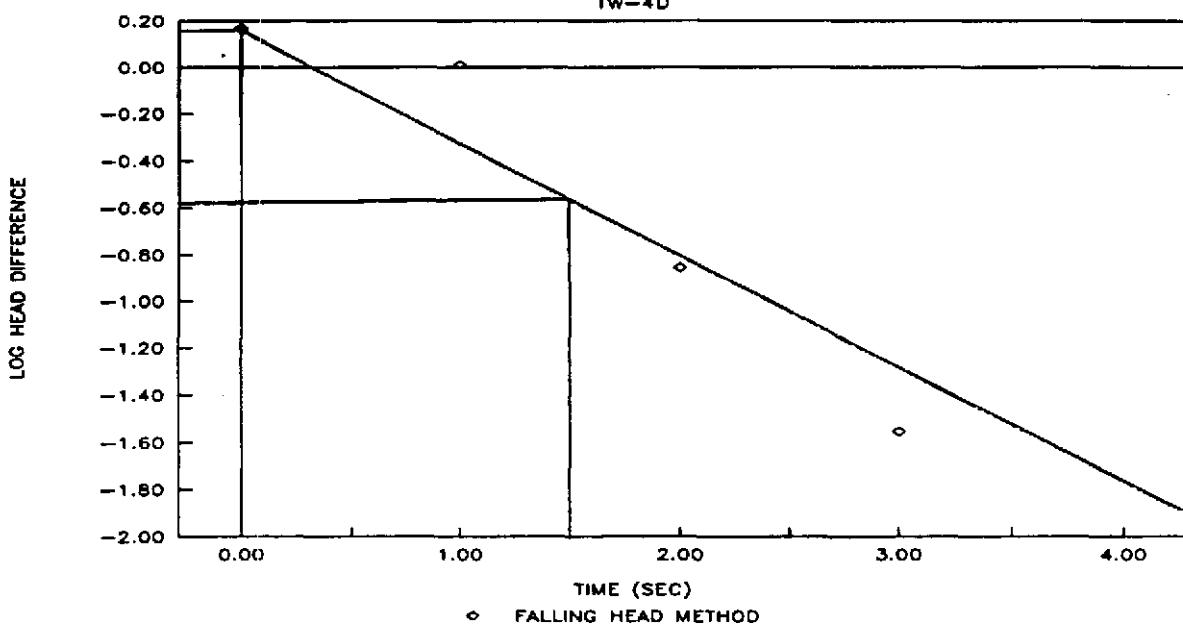
Golder Associates

INDUSTRIEPLEX SITE REMEDIAL TRUST

FIGURE E27

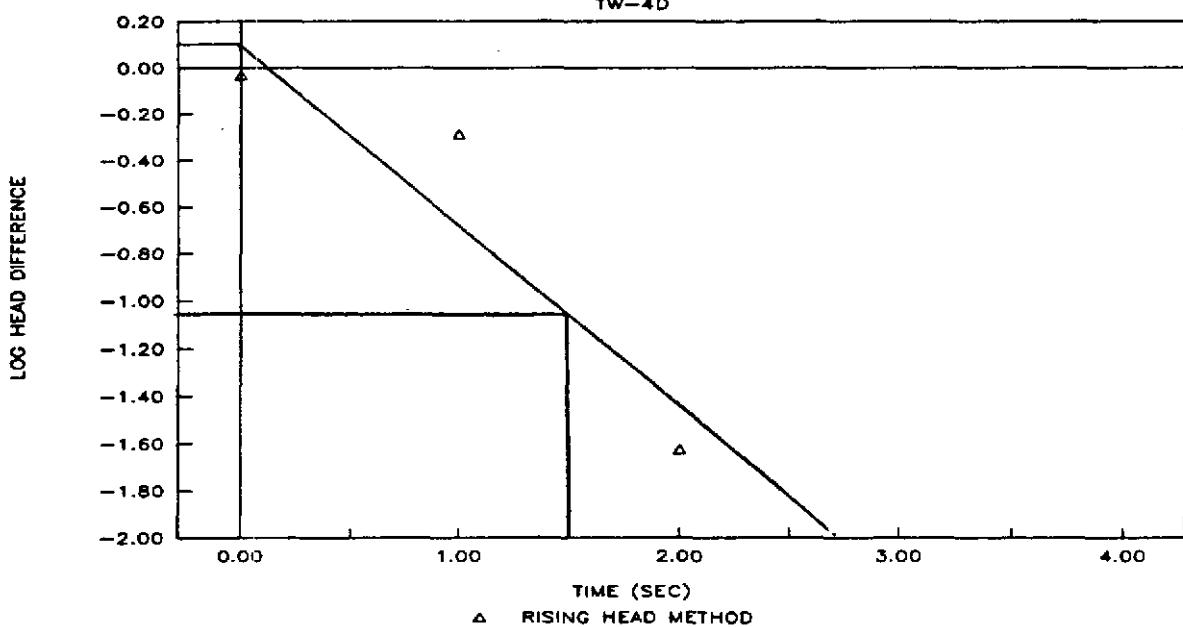
VARIABLE HEAD TEST

TW-4D



VARIABLE HEAD TEST

TW-4D



JOB NO:	893-6255	SCALE:	AS SHOWN
DRAWN:	FG	DATE:	11/21/90
CHECKED:	VB	DWG. NO.:	MA01-360

**WELL TW-4D
BOUWER AND RICE ANALYSIS**

Appendix F
Slug Test Data

ISRT SLUG TEST DATA

This disc includes the raw slug test data collected for the Industri-Plex Site in November 1990.

The files included are:

README.SLG, OW-11.TXT, OW-12.TXT, OW-13.TXT, OW-14.TXT,
OW-17.TXT, OW-18.TXT, OW-18A.TXT, OW-19.TXT, OW-19A.TXT,
OW-21.TXT, OW-23.TXT, OW-30A.TXT, OW-30B.TXT, OW-31.TXT,
OW-32.TXT, OW-36.TXT, OW-37.TXT, OW-38.TXT, OW-39.TXT,
OW-40.TXT, OW-41.TXT, OW-42.TXT, TW-1S.TXT, TW-1D.TXT,
TW-2S.TXT, TW-2D.TXT, TW-3S.TXT, TW-3D.TXT, TW-4S.TXT, and
TW-4D.TXT

The information on this disc corresponds to Appendix C, (Variable Head Test Data) of the final report and includes data on all wells included in the final report.

Some specifications applicable to the interpretation of hydraulic conductivities, are included as a header to the raw data. This information includes casing diameter, sand pack diameter, the open interval, and the initial water level above the transducer. The first three columns of data give the start time for each test in hours, minutes and seconds respectively. The fourth column indicates the elapsed time in seconds that the test was run. Column five gives the water level above the transducer at different

ISRT SLUG TEST DATA

This disc includes the raw slug test data collected for the Industri-Plex Site in November 1990.

The files included are:

README.SLG, OW-11.TXT, OW-12.TXT, OW-13.TXT, OW-14.TXT, OWÄ17.TXT, OW-18.TXT, OW-18A.TXT, OW-19.TXT, OW-19A.TXT, OWÄ-21.TXT, OW-23.TXT, OW-30A.TXT, OW-30B.TXT, OW-31.TXT, OW-32.TXT, OW-36.TXT, OW-37.TXT, OW-38.TXT, OW-39.TXT, OWÄ40.TXT, OW-41.TXT, OW-42.TXT, TW-1S.TXT, TW-1D.TXT, TWÄ2S.TXT, TW-2D.TXT, TW-3S.TXT, TW-3D.TXT, TW-4S.TXT, and TW-4D.TXT

The information on this disc corresponds to Appendix C, (Variable Head Test Data) of the final report and includes data on all wells included in the final report.

Some specifications applicable to the interpretation of hydraulic conductivities, are included as a header to the raw data. This information includes casing diameter, sand pack diameter, the open interval, and the initial water level above the transducer. The first three columns of data give the start time for each test in hours, minutes and seconds respectively. The fourth column indicates the elapsed time in seconds that the test was run. Column five gives the water level above the transducer at different times throughout the test and column six represents the difference between column five and the initial water level above the transducer. Column seven is the head ratio and indicates the water levels' return to equilibrium (initial value). It can be seen from the data that as this value approaches zero, column five values (water level above the transducer) return to the initial value. Columns eight and nine are mathematical functions of the head ratio and head respectively.

The type of data (i.e. rising or falling head data) is also indicated at the beginning of each such test. The points selected from the raw data as the best fitting straight line have been indicated by the use of asterisks(*). One asterisk(*) indicates points selected for the falling head test and two asterisks(**) indicates points selected for the rising head tests.

OW-18A.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-18A

DATE= 11/07/90
 CASING DIAMETER= 8.34 INCHES
 SAND DIAMETER= 12.25 INCHES
 OPEN INTERVAL= 7.42 FEET
 INITIAL WATER ABOVE TRANS.= 6.78 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00	0.00	-0.20	17	4	56	0	7.412	0.63
0.41	-0.39	-0.59	17	5	58	2	7.037	0.26
0.23 *	-0.65	-0.84	17	5	0	4	6.923	0.14
0.16	-0.80	-1.00	17	5	2	6	6.880	0.10
0.12	-0.91	-1.11	17	5	4	8	6.858	0.08
0.09	-1.03	-1.23	17	5	6	10	6.839	0.06
0.07 *	-1.17	-1.37	17	5	8	12	6.823	0.04
0.04	-1.40	-1.60	17	5	10	14	6.805	0.03
0.04	-1.39	-1.59	17	5	12	16	6.806	0.03
0.03	-1.46	-1.66	17	5	14	18	6.802	0.02
0.03	-1.53	-1.73	17	5	16	20	6.799	0.02
0.02	-1.69	-1.88	17	5	18	22	6.793	0.01
0.02	-1.71	-1.91	17	5	20	24	6.792	0.01
0.01	-1.92	-2.12	17	5	22	26	6.788	0.01
-0.00	ERR	ERR				28	6.780	-0.00

OW-18A.TXT

0.02	-1.61	-1.81	17	5	26	30	6.795	0.02
0.02	-1.81	-2.01	17	5	28	32	6.790	0.01
-0.00	ERR	ERR	17	5	30	34	6.779	-0.00
0.00	-2.90	-3.10	17	5	32	36	6.781	0.00
-0.00	ERR	ERR	17	5	34	38	6.777	-0.00
0.02	-1.79	-1.99	17	5	36	40	6.790	0.01
0.00	-2.58	-2.78	17	5	38	42	6.782	0.00
-0.01	ERR	ERR	17	5	40	44	6.776	-0.00
-0.01	ERR	ERR	17	5	42	46	6.777	-0.00
-0.01	ERR	ERR	17	5	44	48	6.778	-0.00
-0.00	ERR	ERR	17	5	46	50	6.778	-0.00
-0.00	ERR	ERR	17	5	48	52	6.778	-0.00
-0.00	ERR	ERR	17	5	56	60	6.778	-0.00
-0.00	ERR	ERR	17	5	58	62	6.781	0.00
0.00	-2.64	-2.84	17	6	0	64	6.781	0.00
0.00	-2.90	-3.10	17	6	2	66	5.630	-1.15
-1.82	ERR	ERR	RISING HEAD TEST					
1.00 **	0.00	-0.24	17	6	4	0	6.198	0.58
0.47	-0.33	-0.56	17	6	6	2	6.505	0.28
0.25	-0.61	-0.85	17	6	8	4	6.637	0.14
0.15	-0.83	-1.06	17	6	10	6	6.693	0.09
0.09 **	-1.03	-1.26	17	6	12	8	6.725	0.05
0.06	-1.23	-1.46	17	6	14	10	6.745	0.03
0.04	-1.41	-1.65	17	6	16	12	6.758	0.02
0.03	-1.46	-1.70	17	6	18	14	6.760	0.02
0.01	-1.86	-2.10	17	6	20	16	6.772	0.01
0.02	-1.63	-1.87	17	6	22	18	6.766	0.01
0.00	-2.34	-2.58	17	6	24	20	6.777	0.00
0.00	-3.32	-3.56	17	6	26	22	6.780	0.00
0.00	-2.63	-2.87	17	6	28	24	6.779	0.00
-0.00	ERR	ERR	17	6	30	26	6.782	-0.00

			17	6	32	28	6.786	-0.01
-0.01	ERR	ERR	17	6	34	30	6.784	-0.00
-0.01	ERR	ERR	17	6	36	32	6.783	-0.00
-0.00	ERR	ERR	17	6	38	34	6.785	-0.01
-0.01	ERR	ERR						

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.22E-01 CM/SEC FALLING

OW-18.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-18

		DATE=	11/07/90
CASING		DIAMETER=	6 INCHES
SAND		DIAMETER=	12 INCHES
OPEN		INTERVAL=	35.0 FEET
		INITIAL WATER ABOVE TRANS.=	10.7 FEET

HEAD RATIO	HEAD LOG	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00 *	0 -0.02516		17	16	0	0	11.644	0.94
0.96	-0.01764 -0.04281		17	16	2	2	11.606	0.91
0.87	-0.05997 +0.08514		17	16	4	4	11.522	0.82
0.83	-0.08029 -0.10546		17	16	6	6	11.484	0.78
0.78	-0.10815 -0.13332		17	16	8	8	11.436	0.74
0.74	-0.12852 -0.15369		17	16	10	10	11.402	0.70
0.71	-0.15157 -0.17674		17	16	12	12	11.366	0.67
0.67 *	-0.17193 -0.19710		17	16	14	14	11.335	0.64
0.63	-0.19951 -0.22467		17	16	16	16	11.296	0.60
0.59	-0.23181 -0.25697		17	16	18	18	11.253	0.55
0.57	-0.24480 -0.26997		17	16	20	20	11.237	0.54
0.54	-0.26452 -0.28968		17	16	22	22	11.213	0.51
0.53	-0.27612 -0.30128		17	16	24	24	11.200	0.50
0.50	-0.30306 -0.32822		17	16	26	26	11.170	0.47

			17	16	28	28	11.145	0.44
0.47	-0.32693	-0.35210	17	16	30	30	11.135	0.43
0.46	-0.33669	-0.36185	17	16	32	32	11.120	0.42
0.44	-0.35197	-0.37714	17	16	34	34	11.095	0.39
0.42	-0.37854	-0.40371	17	16	36	36	11.084	0.38
0.41	-0.39052	-0.41568	17	16	38	38	11.063	0.36
0.39	-0.41448	-0.43964	17	16	40	40	11.063	0.36
0.39	-0.41448	-0.43964	17	16	42	42	11.034	0.33
0.35	-0.45170	-0.47686	17	16	44	44	11.028	0.33
0.35	-0.45903	-0.48419	17	16	46	46	11.017	0.32
0.34	-0.47348	-0.49865	17	16	48	48	11.024	0.32
0.34	-0.46417	-0.48934	17	16	50	50	11.014	0.31
0.33	-0.47732	-0.50248	17	16	52	52	11.006	0.31
0.32	-0.48843	-0.51360	17	16	54	54	10.985	0.28
0.30	-0.52030	-0.54547	17	16	56	56	10.975	0.27
0.29	-0.53597	-0.56113	17	16	58	58	10.977	0.28
0.29	-0.53158	-0.55674	17	17	0	60	10.978	0.28
0.29	-0.53091	-0.55607	17	17	2	62	10.961	0.26
0.28	-0.55825	-0.58342	17	17	4	64	10.960	0.26
0.28	-0.55933	-0.58449	17	17	6	66	10.957	0.26
0.27	-0.56510	-0.59026	17	17	8	68	10.964	0.26
0.28	-0.55363	-0.57880	17	17	10	70	10.955	0.26
0.27	-0.56764	-0.59281	17	17	12	72	10.939	0.24
0.25	-0.59593	-0.62110	17	17	14	74	10.940	0.24
0.25	-0.59515	-0.62032	17	17	16	76	10.940	0.24
0.25	-0.59437	-0.61954	17	17	18	78	10.930	0.23
0.24	-0.61383	-0.63900	17	17	20	80	10.929	0.23
0.24	-0.61505	-0.64022	17	17	22	82	10.944	0.24
0.26	-0.58782	-0.61299	17	17	24	84	10.941	0.24
0.26	-0.59282	-0.61799	17	17	26	86	10.941	0.24
0.26	-0.59282	-0.61799	17	17	28	88	10.925	0.23
0.24	-0.62203	-0.64719	17	17	30	90	10.922	0.22

OW-18.TXT

0.24	-0.62828 -0.65345	17	17	32	92	10.923	0.22
0.24	-0.62660 -0.65177	17	17	34	94	10.934	0.23
0.25	-0.60538 -0.63055	17	17	36	96	10.912	0.21
0.22	-0.64803 -0.67320	17	17	38	98	10.932	0.23
0.25	-0.61019 -0.63536						

0.22	-0.64891 -0.67408	17	17	40	100	10.912	0.21
0.23	-0.64323 -0.66839	17	17	42	102	10.915	0.21
0.23	-0.63933 -0.66450	17	17	44	104	10.917	0.22
0.22	-0.66097 -0.68613	17	18	58	178	10.906	0.21
0.20	-0.70274 -0.72791	17	19	0	180	10.887	0.19
0.20	-0.70675 -0.73192	17	19	2	182	10.885	0.19
0.20	-0.70826 -0.73343	17	19	4	184	10.885	0.18
0.15	-0.82512 -0.85029	17	19	6	186	10.841	0.14
0.20	-0.68998 -0.71514	17	19	8	188	10.893	0.19
0.21	-0.68805 -0.71321	17	19	18	198	10.894	0.19
0.21	-0.67757 -0.70274	17	19	20	200	10.898	0.20
0.20	-0.68853 -0.71369	17	19	22	202	10.893	0.19
0.18	-0.73426 -0.75943	17	19	24	204	10.874	0.17
	RISING HEAD TEST						
1.00 **	0 -0.17200	17	19	34	0	10.027	0.67
0.93	-0.03085 -0.20286	17	19	36	2	10.073	0.63
0.89	-0.04955 -0.22155	17	19	38	4	10.100	0.60
0.84	-0.07728 -0.24928	17	19	40	6	10.137	0.56
0.78	-0.10620 -0.27820	17	19	42	8	10.173	0.53
0.72	-0.14119 -0.31319	17	19	44	10	10.214	0.49
0.67	-0.17281 -0.34481	17	19	46	12	10.248	0.45
0.66	-0.17779 -0.34979	17	19	48	14	10.253	0.45
				50	16	10.281	0.42

OW-18.TXT							
0.62	-0.20624	-0.37824	17	19	52	18	10.309
0.58	-0.23621	-0.40821	17	19	54	20	10.332
0.55	-0.26202	-0.43402	17	19	56	22	10.349
0.52	-0.28304	-0.45504	17	19	58	24	10.400
0.45	-0.35112	-0.52312	17	20	0	26	10.392
0.46	-0.34007	-0.51207	17	20	2	28	10.412
0.43	-0.36922	-0.54122	17	20	4	30	10.429
0.40 **	-0.39527	-0.56727	17	20	6	32	10.445
0.38	-0.42152	-0.59353	17	20	8	34	10.454
0.37	-0.43716	-0.60916	17	20	10	36	10.470
0.34	-0.46536	-0.63736	17	20	12	38	10.479
0.33	-0.48353	-0.65553	17	20	14	40	10.494
0.31	-0.51456	-0.68657	17	20	16	42	10.506
0.29	-0.54119	-0.71319	17	20	18	44	10.545
0.23	-0.63732	-0.80932	17	20	20	46	10.530
0.25	-0.59661	-0.76861	17	20	22	48	10.567
0.20	-0.70411	-0.87611	17	20	24	50	10.543
0.23	-0.63075	-0.80275	17	20	26	52	10.581
0.18	-0.75382	-0.92582	17	20	28	54	10.565
0.20	-0.69647	-0.86847	17	20	30	56	10.596
0.15	-0.80996	-0.98196	17	20	32	58	10.572
0.19	-0.71981	-0.89181	17	20	34	60	10.609
0.14	-0.86929	-1.04129	17	20	36	62	10.590
0.16	-0.78645	-0.95846	17	20	38	64	10.617
0.12	-0.91125	-1.08325	17	20	40	66	10.598
0.15	-0.81900	-0.99100	17	20	42	68	10.603
0.14	-0.84342	-1.01542	17	20	44	70	10.601
0.15	-0.83386	-1.00586	17	20	46	72	10.610
0.13	-0.87238	-1.04438	17	20	48	74	10.615
0.13	-0.89790	-1.06990	17	20	50	76	10.615
0.13	-0.89900	-1.07100	17	20	52	78	10.622
0.12	-0.93325	-1.10525					0.08

0W-18.TXT

0.06	-1.19184	-1.36385	17	20	54	80	10.657	0.04
0.10	-0.98761	-1.15961	17	20	56	82	10.631	0.07
<hr/>								
0.07	-1.16672	-1.33873	17	20	58	84	10.654	0.05
0.06	-1.23012	-1.40212	17	21	0	86	10.660	0.04
0.09	-1.05131	-1.22331	17	21	2	88	10.640	0.06
0.09	-1.04975	-1.22175	17	21	4	90	10.640	0.06
0.09	-1.05601	-1.22801	17	21	6	92	10.641	0.06
0.09	-1.03299	-1.20499	17	21	8	94	10.638	0.06
0.08	-1.09732	-1.26932	17	21	10	96	10.646	0.05
0.07	-1.14298	-1.31498	17	21	12	98	10.652	0.05
0.08	-1.08199	-1.25399	17	21	14	100	10.644	0.06
0.04	-1.37061	-1.54262	17	21	16	102	10.671	0.03
0.07	-1.14298	-1.31498	17	21	18	104	10.652	0.05

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 3.27E-03 CM/SEC FALLING

OW-11.TXT

DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-11

CASING	DIAMETER=	5.93	INCHES
SAND	DIAMETER=	8	INCHES
OPEN	INTERVAL=	23.05	FEET
INITIAL WATER ABOVE TRANS.=		14.74	FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	TIME (FEET)	TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS				
FALLING HEAD TEST									
1.00 *	0.00	-0.20	13	10	44	0	15.366	0.63	
0.61	-0.22	-0.42	13	10	46	2	15.121	0.38	
0.45	-0.34	-0.55	13	10	48	4	15.024	0.28	
0.31	-0.50	-0.71	13	10	50	6	14.936	0.20	
0.21	-0.68	-0.89	13	10	52	8	14.870	0.13	
0.13 *	-0.88	-1.09	13	10	54	10	14.822	0.08	
0.09	-1.03	-1.23	13	10	56	12	14.799	0.06	
0.05	-1.34	-1.54	13	10	58	14	14.769	0.03	
0.02	-1.71	-1.92	13	11	0	16	14.752	0.01	
0.02	-1.82	-2.02	13	11	2	18	14.750	0.01	
-0.00	ERR	ERR	13	11	4	20	14.739	-0.00	
-0.00	ERR	ERR	13	11	6	22	14.737	-0.00	
-0.02	ERR	ERR	13	11	8	24	14.727	-0.01	
-0.02	ERR	ERR	13	11	10	26	14.730	-0.01	
-0.01	ERR	ERR	13	11	12	28	14.734	-0.01	
RISING HEAD TEST									
1.00 **	0.00	0.10	13	12	32	0	13.472	1.27	

OW-11.TXT							
0.77	-0.11	-0.01	13	12	34	2	13.765
0.60	-0.22	-0.12	13	12	36	4	13.983
0.45	-0.35	-0.24	13	12	38	6	14.171
0.33	-0.48	-0.38	13	12	40	8	14.321
0.24	-0.61	-0.51	13	12	42	10	14.430
0.18	-0.74	-0.64	13	12	44	12	14.511
0.12	-0.92	-0.82	13	12	46	14	14.588
0.09	-1.02	-0.92	13	12	48	16	14.620
0.06 **	-1.23	-1.13	13	12	50	18	14.666
0.04	-1.40	-1.30	13	12	52	20	14.689
0.03	-1.55	-1.44	13	12	54	22	14.704
0.01	-1.95	-1.84	13	12	56	24	14.726
0.01	-2.08	-1.97	13	12	58	26	14.729
-0.00	ERR	ERR	13	13	0	28	14.743
-0.01	ERR	ERR	13	13	2	30	14.747
-0.02	ERR	ERR	13	13	4	32	14.770
-0.01	ERR	ERR	13	13	6	34	14.754
-0.02	ERR	ERR	13	13	8	36	14.766
<hr/>							
-0.01	ERR	ERR	13	13	10	38	14.757
-0.03	ERR	ERR	13	13	12	40	14.774

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 3.48E-02 CM/SEC FALLING

OW-12.TXT

DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-12

DATE= 11/08/90

CASING	DIAMETER=	4	INCHES
SAND	DIAMETER=	8	INCHES
OPEN	INTERVAL=	38.5	FEET
INITIAL WATER ABOVE TRANS.=		12.92	FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	TIME (FEET)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS				
FALLING HEAD TEST									
1.00	0.00	0.26	15	58	54	0	14.753	1.83	
0.73 *	-0.14	0.13	15	58	56	2	14.257	1.34	
0.63	-0.20	0.06	15	58	58	4	14.067	1.15	
0.60	-0.22	0.04	15	59	0	6	14.018	1.10	
0.50	-0.30	-0.04	15	59	2	8	13.838	0.92	
0.45	-0.35	-0.08	15	59	4	10	13.747	0.83	
0.41	-0.38	-0.12	15	59	6	12	13.676	0.76	
0.39	-0.41	-0.15	15	59	8	14	13.627	0.71	
0.46	-0.34	-0.07	15	59	10	16	13.767	0.85	
0.31 *	-0.50	-0.24	15	59	12	18	13.495	0.58	
0.44	-0.36	-0.10	15	59	14	20	13.720	0.80	
0.27	-0.57	-0.30	15	59	16	22	13.415	0.50	
0.26	-0.59	-0.33	15	59	18	24	13.390	0.47	
0.47	-0.33	-0.07	15	59	20	26	13.778	0.86	
0.41	-0.38	-0.12	15	59	22	28	13.679	0.76	
0.17	-0.77	-0.50	15	59	24	30	13.233	0.31	
					26	32	13.208	0.29	

OW-12.TXT

0.16	-0.80	-0.54	15	59	28	34	13.618	0.70
0.38	-0.42	-0.16	15	59	30	36	13.184	0.26
0.14	-0.84	-0.58	15	59	32	38	13.146	0.23
0.12	-0.91	-0.65	15	59	34	40	13.215	0.29
0.16	-0.79	-0.53	15	59	36	42	13.442	0.52
0.28	-0.55	-0.28	15	59	38	44	13.443	0.52
0.29	-0.54	-0.28	15	59	40	46	13.499	0.58
0.32	-0.50	-0.24	15	59	42	48	13.280	0.36
0.20	-0.71	-0.44	15	59	44	50	13.430	0.51
0.28	-0.56	-0.29	15	59	46	52	13.348	0.43
0.23	-0.63	-0.37	15	59	48	54	13.197	0.28
0.15	-0.82	-0.56	15	59	50	56	12.971	0.05
0.03	-1.55	-1.29	15	59	52	58	13.374	0.45
0.25	-0.61	-0.34	15	59	54	60	13.262	0.34
0.19	-0.73	-0.47	15	59	56	62	12.968	0.05
0.03	-1.58	-1.31	15	59	58	64	12.936	0.02
0.01	-2.06	-1.79	16	0	0	66	13.085	0.17
0.09	-1.04	-0.78	16	0	2	68	13.077	0.16
0.09	-1.07	-0.80						

0.01	-1.83	-1.57	16	0	6	72	12.947	0.03
0.06	-1.21	-0.94	16	0	10	76	13.034	0.11
0.13	-0.88	-0.62	16	0	12	78	13.161	0.24
0.09	-1.05	-0.79	16	0	14	80	13.084	0.16
0.01	-2.18	-1.91	16	0	18	84	12.932	0.01
0.20	-0.70	-0.43	16	0	22	88	13.289	0.37
0.12	-0.92	-0.66	16	0	24	90	13.139	0.22
0.12	-0.91	-0.65	16	0	26	92	13.145	0.23

			16	0	28	94	13.172	0.25
0.14	-0.86	-0.60	16	0	30	96	12.986	0.07
0.04	-1.45	-1.18	16	0	40	106	13.053	0.13
0.07	-1.14	-0.88	RISING HEAD TEST					
1.00 **	0.00	0.18	16	0	48	0	11.393	1.53
0.90	-0.05	0.14	16	0	50	2	11.544	1.38
0.64	-0.19	-0.01	16	0	52	4	11.940	0.98
0.66	-0.18	0.00	16	0	54	6	11.919	1.00
0.53	-0.27	-0.09	16	0	56	8	12.106	0.81
0.43	-0.37	-0.19	16	1	58	10	12.268	0.65
0.46	-0.34	-0.15	16	1	60	12	12.215	0.70
0.56	-0.25	-0.07	16	1	62	14	12.064	0.86
0.34	-0.47	-0.29	16	1	64	16	12.406	0.51
0.31	-0.51	-0.32	16	1	66	18	12.446	0.47
0.24	-0.62	-0.44	16	1	68	20	12.553	0.37
0.24 **	-0.62	-0.43	16	1	70	22	12.552	0.37
0.40	-0.40	-0.22	16	1	72	24	12.313	0.61
0.39	-0.41	-0.22	16	1	74	26	12.323	0.60
0.17	-0.76	-0.57	16	1	76	28	12.653	0.27
0.36	-0.45	-0.26	16	1	78	30	12.376	0.54
0.12	-0.92	-0.74	16	1	80	32	12.736	0.18
0.13	-0.90	-0.71	16	1	82	34	12.726	0.19
0.26	-0.58	-0.39	16	1	84	36	12.517	0.40
0.18	-0.74	-0.56	16	1	86	38	12.645	0.28
0.01	-2.01	-1.83	16	1	88	40	12.905	0.01
0.07	-1.13	-0.95	16	1	90	42	12.807	0.11
0.18	-0.73	-0.55	16	1	92	44	12.639	0.28
0.24	-0.62	-0.44	16	1	94	46	12.558	0.36
0.22	-0.66	-0.48	16	1	96	48	12.587	0.33
0.08	-1.11	-0.93	16	1	98	50	12.802	0.12
0.14	-0.86	-0.68	16	1	100	52	12.711	0.21
0.13	-0.89	-0.71	16	1	102	54	12.725	0.19

OW-12.TXT

			16	1	46	58	12.819	0.10
0.07	-1.18	-1.00	16	1	48	60	12.867	0.05
0.03	-1.46	-1.27	16	1	50	62	12.685	0.23
0.15	-0.81	-0.63	16	1	54	66	12.906	0.01
0.01	-2.04	-1.86	16	1	56	68	12.683	0.24
0.16	-0.81	-0.63	16	1	58	70	12.669	0.25
0.16	-0.78	-0.60	16	2	0	72	12.795	0.12
0.08	-1.09	-0.90	16	2	2	74	12.916	0.00
0.00	-2.61	-2.43	16	2	4	76	12.771	0.15
0.10	-1.01	-0.83	16	2	6	78	12.853	0.07
0.04	-1.36	-1.17	16	2	8	80	12.880	0.04
0.03	-1.58	-1.40	16	2	14	86	12.894	0.03
0.02	-1.77	-1.58	16	2	18	90	12.771	0.15
0.10	-1.01	-0.83	16	2	20	92	12.869	0.05
0.03	-1.48	-1.29	16	2	22	94	12.790	0.13
0.09	-1.07	-0.89	16	2	24	96	12.868	0.05
0.03	-1.47	-1.29						

0.08	-1.09	-0.90	16	2	26	98	12.795	0.12
0.08	-1.08	-0.89	16	2	30	102	12.792	0.13
0.01	-1.99	-1.81	16	2	32	104	12.904	0.02
0.00	-2.36	-2.17	16	2	34	106	12.913	0.01
0.00	-2.33	-2.14	16	2	38	110	12.913	0.01

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

OW-12.TXT

K= 2.75E-03 CM/SEC FALLING

HEAD*

OW-17.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-17

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 8.5 FEET
 INITIAL WATER ABOVE TRANS.= 13.6 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00	0.00	0.08	13	19	42	0	14.795	1.19
0.73	-0.14	-0.06	13	19	44	2	14.471	0.87
0.52 *	-0.28	-0.21	13	19	46	4	14.224	0.62
0.63	-0.20	-0.12	13	19	48	6	14.359	0.76
0.37	-0.43	-0.35	13	19	50	8	14.046	0.45
0.64	-0.20	-0.12	13	19	52	10	14.360	0.76
0.49	-0.31	-0.23	13	19	54	12	14.191	0.59
0.46	-0.34	-0.26	13	19	56	14	14.147	0.55
0.19	-0.71	-0.63	13	20	0	16	13.832	0.23
0.34	-0.47	-0.39	13	20	2	18	14.004	0.40
0.40	-0.40	-0.32	13	20	4	20	14.080	0.48
0.11 *	-0.94	-0.87	13	20	6	22	13.736	0.14
0.25	-0.60	-0.52	13	20	8	24	13.901	0.30
0.28	-0.55	-0.47				26	13.936	0.34

OW-17.TXT									
			13	20	10	28	13.852	0.25	
0.21	-0.68	-0.60	13	20	12	30	13.748	0.15	
0.12	-0.91	-0.83	13	20	14	32	13.904	0.30	
0.25	-0.59	-0.52	13	20	16	34	13.672	0.07	
0.06	-1.22	-1.14	13	20	18	36	13.974	0.37	
0.31	-0.50	-0.43	13	20	20	38	13.982	0.38	
0.32	-0.50	-0.42	13	20	22	40	13.733	0.13	
0.11	-0.95	-0.88	13	20	24	42	13.727	0.13	
0.11	-0.97	-0.90	13	20	26	44	13.983	0.38	
0.32	-0.49	-0.42	13	20	28	46	13.664	0.06	
0.05	-1.27	-1.20	13	20	30	48	13.621	0.02	
0.02	-1.75	-1.67	13	20	32	50	13.994	0.39	
0.33	-0.48	-0.40	13	20	34	52	13.740	0.14	
0.12	-0.93	-0.86	13	20	36	54	13.716	0.12	
0.10	-1.01	-0.94	13	20	38	56	13.637	0.04	
0.03	-1.51	-1.43	13	20	40	58	13.619	0.02	
0.02	-1.81	-1.73	13	20	42	60	13.971	0.37	
0.31	-0.51	-0.43	13	20	44	62	14.038	0.44	
0.37	-0.44	-0.36	13	20	46	64	13.659	0.06	
0.05	-1.31	-1.23	13	20	54	72	13.827	0.23	
0.19	-0.72	-0.64	RISING HEAD TEST			58	0	12.224	1.38
1.00 **	0.00	0.14	13	20					

0.87	-0.06	0.08	13	21	0	2	12.404	1.20
0.57	-0.25	-0.11	13	21	2	4	12.820	0.78
0.63	-0.20	-0.06	13	21	4	6	12.729	0.87
0.48	-0.31	-0.18	13	21	6	8	12.933	0.67
0.50	-0.30	-0.16	13	21	8	10	12.910	0.69

OW-17.TXT							
0.23	-0.64	-0.50	13	21	10	12	13.287 0.31
0.35	-0.45	-0.31	13	21	12	14	13.115 0.49
0.33	-0.49	-0.35	13	21	14	16	13.150 0.45
0.14	-0.85	-0.71	13	21	16	18	13.407 0.19
0.07	-1.18	-1.04	13	21	18	20	13.509 0.09
0.21 **	-0.68	-0.54	13	21	20	22	13.315 0.29
0.12	-0.93	-0.79	13	21	22	24	13.438 0.16
0.07	-1.17	-1.03	13	21	24	26	13.507 0.09
0.14	-0.85	-0.71	13	21	26	28	13.407 0.19
-0.05	ERR	ERR	13	21	28	30	13.668 -0.07
0.07	-1.17	-1.03	13	21	30	32	13.507 0.09
-0.04	ERR	ERR	13	21	32	34	13.659 -0.06
0.09	-1.06	-0.92	13	21	34	36	13.481 0.12
0.05	-1.31	-1.18	13	21	36	38	13.533 0.07
-0.02	ERR	ERR	13	21	38	40	13.627 -0.03
0.04	-1.40	-1.26	13	21	40	42	13.545 0.06
0.05	-1.28	-1.14	13	21	42	44	13.527 0.07
0.01	-2.19	-2.05	13	21	44	46	13.591 0.01
-0.03	ERR	ERR	13	21	46	48	13.636 -0.04
-0.21	ERR	ERR	13	21	48	50	13.894 -0.29
0.03	-1.57	-1.43	13	21	50	52	13.563 0.04
-0.23	ERR	ERR	13	21	52	54	13.919 -0.32
-0.03	ERR	ERR	13	21	54	56	13.640 -0.04
-0.11	ERR	ERR	13	21	56	58	13.752 -0.15
-0.19	ERR	ERR	13	21	58	60	13.863 -0.26
-0.06	ERR	ERR	13	22	0	62	13.681 -0.08
0.01	-2.19	-2.05	13	22	2	64	13.591 0.01

THESE POINTS

NOTES:

1) * INDICATES THAT BEST FIT LINE PASSES THROUGH

2) ALL DEPTHS MEASURED FROM TOP OF CASING

OW-17.TXT

K= 1.19E-02 CM/SEC FALLING
HEAD*

OW-14.TXT

DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-14

DATE= 11/06/90
 CASING DIAMETER= 5.93 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 30.99 FEET
 INITIAL WATER ABOVE TRANS.= 12.27 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE	
			HOURS	MINUTES	SECONDS		TIME (FEET)	TRANS. (FEET)
FALLING HEAD TEST								
1.00 *	0	0.13	10	34	56	0	13.632	1.36
0.67	-0.17	-0.04	10	34	58	2	13.184	0.91
0.52	-0.29	-0.15	10	35	0	4	12.973	0.70
0.41 *	-0.38	-0.25	10	35	2	6	12.833	0.56
0.36	-0.44	-0.30	10	35	4	8	12.766	0.50
0.34	-0.47	-0.34	10	35	6	10	12.728	0.46
0.32	-0.49	-0.36	10	35	8	12	12.707	0.44
0.30	-0.52	-0.39	10	35	10	14	12.678	0.41
0.28	-0.55	-0.42	10	35	12	16	12.654	0.38
0.27	-0.57	-0.43	10	35	14	18	12.639	0.37
0.26	-0.58	-0.45	10	35	16	20	12.629	0.36
0.25	-0.60	-0.47	10	35	18	22	12.609	0.34
0.24	-0.62	-0.49	10	35	20	24	12.596	0.33
0.23	-0.63	-0.50	10	35	22	26	12.588	0.32
0.23	-0.65	-0.51	10	35	24	28	12.577	0.31
0.22	-0.66	-0.53	10	35	26	30	12.567	0.30
					28	32	12.554	0.28

OW-14.TXT

0.21	-0.68	-0.55	10	35	30	34	12.546	0.28
0.20	-0.69	-0.56	10	35	32	36	12.536	0.27
0.20	-0.71	-0.57	10	35	34	38	12.523	0.25
0.19	-0.73	-0.60	10	35	36	40	12.517	0.25
0.18	-0.74	-0.61	10	35	38	42	12.510	0.24
0.18	-0.75	-0.62	10	35	40	44	12.507	0.24
0.17	-0.76	-0.63	10	35	42	46	12.502	0.23
0.17	-0.77	-0.63	10	35	44	48	12.487	0.22
0.16	-0.80	-0.66	10	35	46	50	12.485	0.22
0.16	-0.80	-0.67	10	35	48	52	12.472	0.20
0.15	-0.83	-0.69	10	35	50	54	12.472	0.20
0.15	-0.83	-0.69	10	35	52	56	12.466	0.20
0.14	-0.84	-0.71	10	35	54	58	12.462	0.19
0.14	-0.85	-0.72	10	35	56	60	12.456	0.19
0.14	-0.87	-0.73	10	35	58	62	12.455	0.19
0.14	-0.87	-0.73	10	36	0	64	12.446	0.18
0.13	-0.89	-0.75	10	36	2	66	12.437	0.17
0.12	-0.91	-0.78	10	36	4	68	12.436	0.17
0.12	-0.91	-0.78						

0.11	-0.95	-0.82	10	36	6	70	12.423	0.15
0.11	-0.95	-0.81	10	36	8	72	12.424	0.15
0.11	-0.96	-0.83	10	36	10	74	12.419	0.15
0.10	-0.98	-0.85	10	36	12	76	12.411	0.14
0.10	-1.00	-0.87	10	36	14	78	12.405	0.14
0.09	-1.02	-0.89	10	36	16	80	12.399	0.13
0.08	-1.08	-0.95	10	36	25	89	12.383	0.11
0.08	-1.12	-0.99	10	36	30	94	12.373	0.10

				OW-14.TXT				
0.07	-1.14	-1.01	10	36	35	99	12.368	0.10
0.06	-1.26	-1.12	10	36	40	104	12.345	0.08
0.05	-1.26	-1.13	10	36	45	109	12.344	0.07
0.06	-1.25	-1.12	10	36	50	114	12.347	0.08
0.04	-1.39	-1.26	10	36	55	119	12.325	0.06
0.03	-1.46	-1.33	10	37	0	124	12.317	0.05
0.04	-1.44	-1.31	10	37	5	129	12.319	0.05
0.03	-1.54	-1.40	10	37	10	134	12.309	0.04
0.02	-1.66	-1.53	10	37	15	139	12.300	0.03
0.01	-1.88	-1.74	10	37	20	144	12.288	0.02
0.01	-2.05	-1.91	10	37	25	149	12.282	0.01
0.00	-2.41	-2.27	10	37	30	154	12.275	0.01
0.00	-2.43	-2.29	10	37	35	159	12.275	0.01
			RISING HEAD TEST					
1.00 **	0.00	0.14	10	40	2	0	10.883	1.39
0.63	-0.20	-0.06	10	40	4	2	11.395	0.87
0.44	-0.35	-0.21	10	40	6	4	11.654	0.62
0.29	-0.53	-0.39	10	40	8	6	11.863	0.41
0.19	-0.72	-0.58	10	40	10	8	12.004	0.27
0.13	-0.88	-0.74	10	40	12	10	12.088	0.18
0.09 **	-1.06	-0.91	10	40	14	12	12.148	0.12
0.06	-1.20	-1.06	10	40	16	14	12.182	0.09
0.05	-1.34	-1.20	10	40	18	16	12.207	0.06
0.04	-1.38	-1.23	10	40	20	18	12.212	0.06
0.03	-1.53	-1.38	10	40	22	20	12.229	0.04
0.03	-1.57	-1.42	10	40	24	22	12.232	0.04
0.02	-1.82	-1.67	10	40	26	24	12.249	0.02
0.02	-1.77	-1.62	10	40	28	26	12.246	0.02
0.01	-1.89	-1.75	10	40	30	28	12.252	0.02
0.01	-1.83	-1.69	10	40	32	30	12.249	0.02
0.02	-1.82	-1.67	10	40	34	32	12.249	0.02
0.01	-2.18	-2.04	10	40	36	34	12.261	0.01

				OW-14.TXT					
				10	40	38	36	12.270	0.00
0.00	-3.50	-3.36		10	40	40	38	12.275	-0.00
-0.00	ERR	ERR		10	40	42	40	12.282	-0.01
-0.01	ERR	ERR		10	40	44	42	12.272	-0.00
-0.00	ERR	ERR		10	40	46	44	12.279	-0.01
-0.01	ERR	ERR		10	40	48	46	12.273	-0.00
-0.00	ERR	ERR		-----	-----	-----	-----	-----	-----

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 2.00E-02 CM/SEC FALLING

DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-13

DATE= 11/07/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 8 INCHES
 OPEN INTERVAL= 18.5 FEET
 INITIAL WATER ABOVE TRANS.= 15.5 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	TIME (FEET)	TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS				
FALLING HEAD TEST									
1.00 *	0.00	0.09	14	8	28	0	16.717	1.22	
0.70	-0.16	-0.07	14	8	30	2	16.351	0.85	
0.52	-0.28	-0.20	14	8	32	4	16.136	0.64	
0.37 *	-0.43	-0.35	14	8	34	6	15.950	0.45	
0.29	-0.54	-0.45	14	8	36	8	15.852	0.35	
0.15	-0.83	-0.74	14	8	38	10	15.682	0.18	
0.13	-0.89	-0.81	14	8	40	12	15.656	0.16	
0.06	-1.24	-1.15	14	8	42	14	15.570	0.07	
0.03	-1.48	-1.40	14	8	44	16	15.540	0.04	
0.03	-1.50	-1.42	14	8	46	18	15.538	0.04	
-0.00	ERR	ERR	14	8	48	20	15.497	-0.00	
0.01	-1.84	-1.76	14	8	50	22	15.517	0.02	
-0.01	ERR	ERR	14	8	52	24	15.486	-0.01	
-0.01	ERR	ERR	14	8	54	26	15.482	-0.02	
-0.02	ERR	ERR	14	8	56	28	15.476	-0.02	
-0.06	ERR	ERR	14	8	58	30	15.429	-0.07	
			14	9	0	32	15.469	-0.03	

0W-13.TXT							
-0.03	ERR	ERR	14	9	2	34	15.482
-0.02	ERR	ERR	14	9	4	36	15.466
-0.03	ERR	ERR	14	9	6	38	15.460
-0.03	ERR	ERR	14	9	8	40	15.480
-0.02	ERR	ERR	14	9	10	42	15.460
-0.03	ERR	ERR	14	9	12	44	15.470
-0.02	ERR	ERR	14	9	14	46	15.478
-0.02	ERR	ERR	14	9	16	48	15.472
-0.02	ERR	ERR	14	9	18	50	15.464
-0.03	ERR	ERR	14	9	20	52	15.462
-0.03	ERR	ERR	14	9	22	54	15.470
-0.02	ERR	ERR	14	9	24	56	15.478
-0.02	ERR	ERR	14	9	40	72	15.457
-0.04	ERR	ERR	14	9	42	74	15.469
-0.03	ERR	ERR	14	9	44	76	15.157
-0.28	ERR	ERR	RISING HEAD TEST		46	0	13.986
1.00 **	0.00	0.18	14	9	48	2	14.457
0.69	-0.16	0.02					1.04

0.48	-0.31	-0.13	14	9	50	4	14.766	0.73
0.34	-0.47	-0.29	14	9	52	6	14.982	0.52
0.25 **	-0.61	-0.43	14	9	54	8	15.128	0.37
0.21	-0.68	-0.50	14	9	56	10	15.180	0.32
0.17	-0.76	-0.58	14	9	58	12	15.237	0.26
0.10	-1.00	-0.82	14	10	0	14	15.350	0.15
0.08	-1.12	-0.94	14	10	2	16	15.385	0.12
0.07	-1.18	-1.00	14	10	4	18	15.399	0.10
				10	6	20	15.426	0.07

OW-13.TXT								
0.05	-1.31	-1.13	14	10	8	22	15.432	0.07
0.04	-1.35	-1.17	14	10	10	24	15.442	0.06
0.04	-1.42	-1.24	14	10	12	26	15.460	0.04
0.03	-1.57	-1.39	14	10	14	28	15.462	0.04
0.03	-1.60	-1.42	14	10	16	30	15.477	0.02
0.02	-1.82	-1.64	14	10	18	32	15.469	0.03
0.02	-1.69	-1.51	14	10	20	34	15.465	0.03
0.02	-1.64	-1.46	14	10	22	36	15.463	0.04
0.02	-1.61	-1.43	14	10	24	38	15.463	0.04
0.02	-1.61	-1.43	14	10	26	40	15.476	0.02
0.02	-1.80	-1.62	14	10	28	42	15.467	0.03
0.02	-1.67	-1.49	14	10	30	44	15.469	0.03
0.02	-1.69	-1.51	14	10	32	46	15.482	0.02
0.01	-1.92	-1.74	14	10	34	48	15.479	0.02
0.01	-1.85	-1.67	14	10	36	50	15.471	0.03
0.02	-1.72	-1.54	14	10	38	52	15.473	0.03
0.02	-1.75	-1.57	14	10	40	54	15.475	0.02
0.02	-1.79	-1.61	14	10	42	56	15.502	-0.00
-0.00	ERR	ERR						

--

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH THESE POINTS
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.53E-02 CM/SEC FALLING

OW-19.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-19

DATE= 11/08/90
CASING DIAMETER= 6 INCHES
SAND DIAMETER= 12.25 INCHES

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)	OPEN INTERVAL= INITIAL WATER ABOVE TRANS.= 21.5 FEET 15.9 FEET	HEAD (FEET)				
			HOURS	MINUTES	SECONDS								
FALLING HEAD TEST													
1.00 *	0.00	-0.03	12	54		21	0	16.829	0.93				
0.76	-0.12	-0.15	12	54		22	1	16.607	0.71				
0.92	-0.04	-0.07	12	54		23	2	16.757	0.86				
0.88	-0.06	-0.09	12	54		24	3	16.715	0.81				
0.59	-0.23	-0.26	12	54		25	4	16.447	0.55				
0.69	-0.16	-0.19	12	54		26	5	16.546	0.65				
0.58	-0.24	-0.27	12	54		27	6	16.436	0.54				
0.61	-0.21	-0.25	12	54		28	7	16.468	0.57				
0.53	-0.27	-0.31	12	54		29	8	16.395	0.49				
0.57	-0.24	-0.27	12	54		30	9	16.432	0.53				
0.71	-0.15	-0.18	12	54		31	10	16.556	0.66				
0.52	-0.29	-0.32	12	54		32	11	16.381	0.48				
0.72	-0.14	-0.18	12	54		33	12	16.568	0.67				
0.66	-0.18	-0.21	12	54		34	13	16.514	0.61				

				OW-19.TXT					
0.42	-0.38	-0.41	12	54	35	14	16.289	0.39	
0.64	-0.19	-0.22	12	54	36	15	16.499	0.60	
0.61	-0.21	-0.25	12	54	37	16	16.467	0.57	
0.66 *	-0.18	-0.21	12	54	38	17	16.515	0.61	
0.42	-0.38	-0.41	12	54	39	18	16.286	0.39	
0.45	-0.35	-0.38	12	54	40	19	16.319	0.42	
0.42	-0.38	-0.41	12	54	41	20	16.291	0.39	
0.48	-0.31	-0.35	12	54	42	21	16.350	0.45	
0.62	-0.21	-0.24	12	54	43	22	16.475	0.57	
0.44	-0.36	-0.39	12	54	44	23	16.308	0.41	
0.37	-0.43	-0.46	12	54	45	24	16.245	0.35	
0.33	-0.48	-0.51	12	54	46	25	16.210	0.31	
0.51	-0.29	-0.32	12	54	47	26	16.374	0.47	
0.32	-0.50	-0.53	12	54	48	27	16.197	0.30	
0.49	-0.31	-0.35	12	54	49	28	16.351	0.45	
0.52	-0.29	-0.32	12	54	50	29	16.379	0.48	
0.48	-0.32	-0.35	12	54	51	30	16.346	0.45	
0.49	-0.31	-0.34	12	54	52	31	16.354	0.45	
0.57	-0.24	-0.27	12	54	53	32	16.432	0.53	
0.30	-0.53	-0.56	12	54	54	33	16.175	0.27	
0.54	-0.27	-0.30	12	54	55	34	16.405	0.50	
0.34	-0.46	-0.50	12	54	56	35	16.219	0.32	
0.18	-0.74	-0.77	12	54	57	36	16.070	0.17	
0.43	-0.37	-0.40	12	54	58	37	16.297	0.40	
0.33	-0.48	-0.52	12	54	59	38	16.205	0.31	
0.49	-0.31	-0.34	12	55	0	39	16.360	0.46	
0.32	-0.50	-0.53	12	55	1	40	16.195	0.29	
0.33	-0.49	-0.52	12	55	2	41	16.202	0.30	
0.44	-0.36	-0.39	12	55	3	42	16.310	0.41	
0.23	-0.64	-0.68	12	55	4	43	16.111	0.21	
0.17	-0.76	-0.79	12	55	5	44	16.061	0.16	
			12	55	6	45	16.230	0.33	

				OW-19.TXT				
0.36	-0.45	-0.48	12	55	7	46	16.100	0.20
0.21	-0.67	-0.70						

0.41	-0.39	-0.42	12	55	8	47	16.282	0.38
0.27	-0.57	-0.60	12	55	9	48	16.151	0.25
0.16	-0.80	-0.83	12	55	10	49	16.048	0.15
0.39	-0.41	-0.44	12	55	11	50	16.264	0.36
0.11	-0.97	-1.00	12	55	12	51	16.000	0.10
0.33	-0.49	-0.52	12	55	13	52	16.204	0.30
0.21	-0.67	-0.70	12	55	14	53	16.099	0.20
0.04	-1.43	-1.46	12	55	15	54	15.935	0.03
0.31	-0.52	-0.55	12	55	16	55	16.183	0.28
0.06	-1.21	-1.24	12	55	17	56	15.957	0.06
0.12	-0.93	-0.96	12	55	18	57	16.009	0.11
0.22	-0.66	-0.70	12	55	19	58	16.101	0.20
0.26	-0.58	-0.61	12	55	20	59	16.144	0.24
0.37	-0.43	-0.47	12	55	21	60	16.242	0.34
0.07	-1.14	-1.17	12	55	22	61	15.967	0.07
0.12	-0.92	-0.96	12	55	23	62	16.011	0.11
0.12	-0.91	-0.95	12	55	24	63	16.013	0.11
0.15	-0.84	-0.87	12	55	25	64	16.035	0.14
0.20	-0.71	-0.74	12	55	26	65	16.082	0.18
0.15	-0.83	-0.86	12	55	27	66	16.038	0.14
0.16	-0.79	-0.82	12	55	28	67	16.052	0.15
0.23	-0.63	-0.66	12	55	29	68	16.117	0.22
0.34	-0.46	-0.49	12	55	30	69	16.220	0.32
0.09	-1.05	-1.08	12	55	31	70	15.983	0.08
0.13	-0.89	-0.92	12	55	32	71	16.021	0.12

0W-19.TXT								
0.24	-0.62	-0.65	12	55	33	72	16.123	0.22
0.17	-0.78	-0.81	12	55	34	73	16.055	0.15
0.05	-1.31	-1.34	12	55	35	74	15.946	0.05
0.11	-0.97	-1.00	12	55	36	75	16.000	0.10
-0.01	ERR	ERR	12	55	37	76	15.895	-0.01
0.28	-0.56	-0.59	12	55	38	77	16.158	0.26
0.19	-0.71	-0.74	12	55	39	78	16.081	0.18
0.14	-0.86	-0.89	12	55	40	79	16.028	0.13
0.18	-0.74	-0.77	12	55	41	80	16.071	0.17
0.09	-1.07	-1.10	12	55	42	81	15.980	0.08
0.34	-0.46	-0.50	12	55	43	82	16.219	0.32
0.04	-1.43	-1.46	12	55	44	83	15.935	0.03
0.06	-1.22	-1.25	12	55	45	84	15.956	0.06
0.22	-0.65	-0.68	12	55	46	85	16.108	0.21
0.12	-0.92	-0.95	12	55	47	86	16.011	0.11
0.08	-1.12	-1.15	12	55	48	87	15.970	0.07
0.05	-1.32	-1.35	12	55	49	88	15.945	0.04
0.22	-0.66	-0.70	12	55	50	89	16.102	0.20
0.09	-1.06	-1.09	12	55	51	90	15.982	0.08
-0.08	ERR	ERR	12	55	52	91	15.822	-0.08
0.12	-0.93	-0.97	12	55	53	92	16.008	0.11
0.20	-0.71	-0.74	12	55	54	93	16.081	0.18
0.20	-0.71	-0.74	12	55	55	94	16.081	0.18
0.19	-0.72	-0.75	12	55	56	95	16.078	0.18
-0.06	ERR	ERR	12	55	57	96	15.846	-0.05
0.32	-0.49	-0.52	12	55	58	97	16.199	0.30
0.24	-0.62	-0.65	12	56	0	99	16.125	0.22
0.12	-0.91	-0.94	12	56	1	100	16.121	0.22
0.24	-0.62	-0.66	12	56	2	101	15.989	0.09
0.10	-1.02	-1.05	12	56	3	102	15.901	0.00
0.00	-3.10	-3.13						

OW-19.TXT

0.10	-1.02	-1.05	12	56	4	103	15.990	0.09
0.14	-0.85	-0.89	12	56	5	104	16.030	0.13
0.02	-1.64	-1.67	12	56	6	105	15.921	0.02
0.11	-0.97	-1.01	12	56	7	106	15.999	0.10
0.10	-0.99	-1.03	12	56	8	107	15.994	0.09
0.29	-0.54	-0.57	12	56	9	108	16.169	0.27
0.21	-0.68	-0.71	12	56	10	109	16.093	0.19
-0.01	ERR	ERR	12	56	11	110	15.892	-0.01
0.18	-0.75	-0.78	12	56	12	111	16.064	0.16
0.24	-0.62	-0.65	12	56	13	112	16.125	0.23
0.04	-1.36	-1.39	12	56	14	113	15.940	0.04
0.08	-1.08	-1.12	12	56	15	114	15.976	0.08
0.01	-1.96	-1.99	12	56	16	115	15.910	0.01
-0.04	ERR	ERR	12	56	17	116	15.867	-0.03
0.00	-2.35	-2.38	12	56	18	117	15.904	0.00
0.12	-0.93	-0.96	12	56	19	118	16.009	0.11
-0.00	ERR	ERR	12	56	20	119	15.895	-0.00
0.12	-0.92	-0.95	12	56	21	120	16.012	0.11
-0.01	ERR	ERR	12	56	22	121	15.890	-0.01
0.26	-0.59	-0.62	12	56	23	122	16.139	0.24
0.32	-0.50	-0.53	12	56	24	123	16.195	0.30
0.14	-0.86	-0.89	12	56	25	124	16.029	0.13
-0.02	ERR	ERR	12	56	26	125	15.881	-0.02
0.12	-0.92	-0.95	12	56	27	126	16.013	0.11
0.09	-1.06	-1.10	12	56	28	127	15.980	0.08
0.19	-0.71	-0.75	12	56	29	128	16.080	0.18
0.27	-0.58	-0.61	12	56	30	129	16.147	0.25

OW-19.TXT							
0.06	-1.23	-1.26	12	56	31	130	15.955
0.02	-1.81	-1.84	12	56	32	131	15.914
0.26	-0.59	-0.62	12	56	33	132	16.138
0.19	-0.73	-0.76	12	56	34	133	16.073
0.09	-1.04	-1.07	12	56	35	134	15.986
0.09	-1.04	-1.07	12	56	36	135	15.984
0.14	-0.85	-0.88	12	56	51.5	150.5	16.032
0.15	-0.81	-0.84	12	56	52.5	151.5	16.044
0.13	-0.89	-0.92	12	56	53.5	152.5	16.019
0.11	-0.97	-1.00	12	56	54.5	153.5	16.000
0.08	-1.11	-1.15	12	56	55.5	154.5	15.971
0.18	-0.73	-0.77	12	56	56.5	155.5	16.072
0.22	-0.66	-0.69	12	56	57.5	156.5	16.105
0.39	-0.41	-0.44	12	56	58.5	157.5	16.260
RISING HEAD TEST							
1.00 **	0.00	-0.06	12	57	3.5	0	15.031
0.54	-0.27	-0.33	12	57	4.5	1	15.431
0.57	-0.24	-0.30	12	57	5.5	2	15.403
0.61	-0.21	-0.28	12	57	6.5	3	15.369
0.50	-0.30	-0.36	12	57	7.5	4	15.462
0.68	-0.17	-0.23	12	57	8.5	5	15.309
0.63	-0.20	-0.26	12	57	9.5	6	15.354
0.44	-0.35	-0.42	12	57	10.5	7	15.516
0.66	-0.18	-0.24	12	57	11.5	8	15.325
0.82	-0.09	-0.15	12	57	12.5	9	15.191
0.56	-0.25	-0.31	12	57	13.5	10	15.415
0.58	-0.24	-0.30	12	57	14.5	11	15.397
0.56	-0.25	-0.31	12	57	15.5	12	15.414
0.61	-0.22	-0.28	12	57	16.5	13	15.373

OW-19.TXT

0.26	-0.59	-0.65	12	57	17.5	14	15.675	0.22
0.57	-0.24	-0.30	12	57	18.5	15	15.404	0.50
0.46	-0.33	-0.39	12	57	19.5	16	15.496	0.40
0.46	-0.34	-0.40	12	57	20.5	17	15.499	0.40
0.37	-0.43	-0.49	12	57	21.5	18	15.576	0.32
0.48	-0.32	-0.38	12	57	22.5	19	15.485	0.42
0.51	-0.29	-0.35	12	57	23.5	20	15.453	0.45
0.43	-0.37	-0.43	12	57	24.5	21	15.528	0.37
0.22	-0.66	-0.72	12	57	25.5	22	15.709	0.19
0.59 **	-0.23	-0.29	12	57	26.5	23	15.390	0.51
0.27	-0.58	-0.64	12	57	27.5	24	15.669	0.23
0.43	-0.37	-0.43	12	57	28.5	25	15.528	0.37
0.24	-0.61	-0.67	12	57	29.5	26	15.688	0.21
0.38	-0.42	-0.49	12	57	30.5	27	15.573	0.33
0.50	-0.30	-0.36	12	57	31.5	28	15.468	0.43
0.27	-0.57	-0.64	12	57	32.5	29	15.669	0.23
0.36	-0.45	-0.51	12	57	33.5	30	15.591	0.31
0.25	-0.60	-0.66	12	57	34.5	31	15.683	0.22
0.11	-0.97	-1.03	12	57	35.5	32	15.808	0.09
0.49	-0.31	-0.37	12	57	36.5	33	15.472	0.43
0.17	-0.77	-0.83	12	57	37.5	34	15.751	0.15
0.07	-1.15	-1.22	12	57	38.5	35	15.839	0.06
0.05	-1.30	-1.37	12	57	39.5	36	15.857	0.04
0.32	-0.50	-0.56	12	57	40.5	37	15.625	0.27
0.29	-0.53	-0.59	12	57	41.5	38	15.645	0.25
0.06	-1.25	-1.31	12	57	42.5	39	15.851	0.05
0.30	-0.52	-0.58	12	57	43.5	40	15.638	0.26
0.33	-0.48	-0.54	12	57	44.5	41	15.613	0.29
0.29	-0.53	-0.59	12	57	45.5	42	15.645	0.25
				57	46.5	43	15.794	0.11

OW-19.TXT									
0.12	-0.91	-0.98	12	57	47.5	44	15.689	0.21	
0.24	-0.61	-0.67	12	57	48.5	45	15.667	0.23	
0.27	-0.57	-0.63	12	57	49.5	46	15.748	0.15	
0.18	-0.76	-0.82	12	57	50.5	47	15.874	0.03	
0.03	-1.53	-1.59	12	57	51.5	48	15.700	0.20	
0.23	-0.64	-0.70	12	57	52.5	49	15.728	0.17	
0.20	-0.70	-0.77	12	57	53.5	50	15.795	0.10	
0.12	-0.92	-0.98	12	57	54.5	51	15.721	0.18	
0.21	-0.69	-0.75	12	57	55.5	52	15.786	0.11	
0.13	-0.88	-0.94	12	57	56.5	53	15.900	-0.00	
-0.00	ERR	ERR	12	57	57.5	54	15.922	-0.02	
-0.03	ERR	ERR	12	57	58.5	55	15.769	0.13	
0.15	-0.82	-0.88	12	57	59.5	56	15.898	0.00	
0.00	-2.58	-2.64	12	58	0.5	57	15.928	-0.03	
-0.03	ERR	ERR	12	58	1.5	58	16.031	-0.13	
-0.15	ERR	ERR	12	58	2.5	59	15.695	0.20	
0.24	-0.63	-0.69	12	58	3.5	60	15.799	0.10	
0.12	-0.94	-1.00	12	58	4.5	61	15.855	0.05	
0.05	-1.28	-1.34	12	58	5.5	62	15.702	0.20	
0.23	-0.64	-0.70	12	58	6.5	63	15.942	-0.04	
-0.05	ERR	ERR	12	58	7.5	64	15.998	-0.10	
-0.11	ERR	ERR	12	58	8.5	65	15.825	0.07	
0.09	-1.07	-1.13	12	58	9.5	66	15.717	0.18	
0.21	-0.68	-0.74	12	58	10.5	67	15.852	0.05	
0.06	-1.26	-1.32	12	58	11.5	68	15.970	-0.07	
-0.08	ERR	ERR	12	58	12.5	69	16.033	-0.13	
-0.15	ERR	ERR							

OW-19.TXT							
0.11	-0.95	-1.01	12	58	13.5	70	15.802
-0.09	ERR	ERR	12	58	14.5	71	15.979
-0.20	ERR	ERR	12	58	15.5	72	16.071
-0.11	ERR	ERR	12	58	16.5	73	15.993
0.01	-2.07	-2.13	12	58	17.5	74	15.893
0.11	-0.94	-1.00	12	58	18.5	75	15.800
-0.08	ERR	ERR	12	58	19.5	76	15.973
-0.22	ERR	ERR	12	58	20.5	77	16.087
-0.03	ERR	ERR	12	58	21.5	78	15.925
0.09	-1.05	-1.11	12	58	22.5	79	15.822
-0.16	ERR	ERR	12	58	23.5	80	16.035
-0.13	ERR	ERR	12	58	24.5	81	16.011
0.09	-1.03	-1.09	12	58	25.5	82	15.819
-0.13	ERR	ERR	12	58	26.5	83	16.012
0.04	-1.36	-1.42	12	58	27.5	84	15.862
-0.12	ERR	ERR	12	58	28.5	85	16.004
-0.18	ERR	ERR	12	58	29.5	86	16.060
-0.12	ERR	ERR	12	58	30.5	87	16.003
0.12	-0.91	-0.97	12	58	31.5	88	15.794
0.01	-2.24	-2.30	12	58	32.5	89	15.895
0.07	-1.15	-1.22	12	58	33.5	90	15.839
-0.12	ERR	ERR	12	58	34.5	91	16.002
0.05	-1.32	-1.38	12	58	35.5	92	15.858
0.12	-0.91	-0.97	12	58	36.5	93	15.793
-0.20	ERR	ERR	12	58	37.5	94	16.074
-0.21	ERR	ERR	12	58	38.5	95	16.084
0.06	-1.20	-1.26	12	58	39.5	96	15.845
-0.01	ERR	ERR	12	58	40.5	97	15.905
-0.01	ERR	ERR	12	58	41.5	98	15.912
0.21	-0.67	-0.73	12	58	42.5	99	15.715
-0.01	ERR	ERR	12	58	43.5	100	15.911
				58	44.5	101	15.885

OW-19.TXT

0.02	-1.76	-1.83		12	58	45.5	102	16.105	-0.21
-0.24	ERR	ERR		12	58	46.5	103	16.036	-0.14
-0.16	ERR	ERR							

NOTES:

- THESE POINTS
- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
 - 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 4.02E-03 CM/SEC FALLING
HEAD*

893-6255

OW-19A.TXT
DECEMBER 1990

VARIABLE HEAD TEST

WELL NO. OW-19A

CASING	DIAMETER=	5.93	INCHES
SAND	DIAMETER=	8	INCHES
OPEN	INTERVAL=	36.83	FEET

DATE= 11/08/90

HEAD RATIO	HEAD RATIO	LOG HEAD	INITIAL WATER ABOVE TRANS.=			15.7 FEET		
			24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00 *	0.00	0.08	12	41	2	0	16.911	1.21
0.25	-0.60	-0.51	12	41	3	1	16.008	0.31
0.37	-0.44	-0.35	12	41	4	2	16.142	0.44
0.10	-1.01	-0.93	12	41	5	3	15.818	0.12
0.09	-1.03	-0.94	12	41	6	4	15.814	0.11
0.05	-1.32	-1.24	12	41	7	5	15.758	0.06
0.10 *	-1.02	-0.94	12	41	8	6	15.816	0.12
0.13	-0.89	-0.80	12	41	9	7	15.857	0.16
0.17	-0.77	-0.69	12	41	10	8	15.907	0.21
-0.01	ERR	ERR	12	41	11	9	15.688	-0.01
-0.07	ERR	ERR	12	41	12	10	15.618	-0.08
-0.06	ERR	ERR	12	41	13	11	15.625	-0.08
-0.02	ERR	ERR	12	41	14	12	15.672	-0.03
-0.11	ERR	ERR	12	41	15	13	15.568	-0.13

OW-19A.TXT								
0.01	-2.09	-2.01	12	41	16	14	15.710	0.01
0.07	-1.19	-1.10	12	41	17	15	15.779	0.08
0.04	-1.38	-1.29	12	41	18	16	15.751	0.05
-0.05	ERR	ERR	12	41	19	17	15.640	-0.06
0.01	-2.13	-2.05	12	41	20	18	15.709	0.01
-0.14	ERR	ERR	12	41	21	19	15.535	-0.17
0.05	-1.32	-1.23	12	41	22	20	15.758	0.06
-0.05	ERR	ERR	12	41	23	21	15.641	-0.06
-0.10	ERR	ERR	12	41	24	22	15.581	-0.12
-0.18	ERR	ERR	12	41	25	23	15.484	-0.22
0.06	-1.20	-1.11	12	41	26	24	15.777	0.08
0.07	-1.14	-1.06	12	41	27	25	15.788	0.09
RISING HEAD TEST								
1.00 **	0.00	0.04	12	42	7	0	14.598	1.10
0.34	-0.47	-0.43	12	42	8	1	15.326	0.37
0.14	-0.84	-0.80	12	42	9	2	15.542	0.16
0.27	-0.57	-0.53	12	42	10	3	15.403	0.30
0.12	-0.91	-0.86	12	42	11	4	15.564	0.14
0.13	-0.87	-0.83	12	42	12	5	15.552	0.15
0.11	-0.96	-0.92	12	42	13	6	15.580	0.12
-0.04	ERR	ERR	12	42	14	7	15.749	-0.05
0.07	-1.16	-1.12	12	42	15	8	15.624	0.08
-0.07	ERR	ERR	12	42	16	9	15.779	-0.08
-0.15	ERR	ERR	12	42	17	10	15.866	-0.17
0.09	-1.02	-0.98	12	42	18	11	15.596	0.10
-0.18	ERR	ERR	12	42	19	12	15.899	-0.20
0.11	-0.96	-0.92	12	42	20	13	15.579	0.12
0.04 **	-1.45	-1.41	12	42	21	14	15.661	0.04
0.02	-1.68	-1.64	12	42	22	15	15.677	0.02
-0.09	ERR	ERR	12	42	23	16	15.804	-0.10
0.01	-1.96	-1.92	12	42	25	18	15.688	0.01
0.07	-1.13	-1.08	12	42	26	19	15.618	0.08

				OW-19A.TXT					
				12	42	27	20	15.765	-0.07
	ERR	ERR		12	42	28	21	15.609	0.09
0.08	-1.09	-1.04							
0.00	-2.50	-2.45		12	42	29	22	15.696	0.00
-0.17	ERR	ERR		12	42	30	23	15.889	-0.19
-0.18	ERR	ERR		12	42	31	24	15.898	-0.20
-0.17	ERR	ERR		12	42	32	25	15.882	-0.18
0.00	-2.35	-2.31		12	42	33	26	15.695	0.00
0.02	-1.80	-1.75		12	42	34	27	15.682	0.02
0.03	-1.50	-1.46		12	42	35	28	15.666	0.03
-0.18	ERR	ERR		12	42	36	29	15.897	-0.20
-0.01	ERR	ERR		12	42	37	30	15.707	-0.01
-0.15	ERR	ERR		12	42	38	31	15.871	-0.17
0.02	-1.75	-1.71		12	42	39	32	15.681	0.02
0.08	-1.09	-1.05		12	42	40	33	15.610	0.09
-0.15	ERR	ERR		12	42	42	35	15.613	0.09
0.08	-1.10	-1.06		12	42	43	36	15.828	-0.13
-0.12	ERR	ERR		12	42	44	37	15.687	0.01
0.01	-1.94	-1.90		12	42	45	38	15.523	0.18
0.16	-0.79	-0.75		12	42	46	39	15.848	-0.15
-0.13	ERR	ERR		12	42	47	40	15.637	0.06
0.06	-1.25	-1.20		12	42	48	41	15.635	0.07
0.06	-1.23	-1.19		12	42	49	42	15.555	0.14
0.13	-0.88	-0.84		12	42	50	43	15.834	-0.13
-0.12	ERR	ERR		12	42	51	44	15.738	-0.04
-0.03	ERR	ERR		12	42	52	45	15.564	0.14
0.12	-0.91	-0.86		12	42	53	46	15.709	-0.01

OW-19A.TXT								
	ERR	ERR	12	42	54	47	15.892	-0.19
-0.01			12	42	54	47	15.892	-0.19
-0.17	ERR	ERR	12	42	55	48	15.852	-0.15
-0.14	ERR	ERR	12	42	56	49	15.590	0.11
0.10	-1.00	-0.96	12	42	57	50	15.695	0.00
0.00	-2.35	-2.31	12	42	58	51	15.715	-0.01
-0.01	ERR	ERR	12	42	59	52	15.633	0.07
0.06	-1.22	-1.17	12	43	0	53	15.559	0.14
0.13	-0.89	-0.85	12	43	1	54	15.672	0.03
0.02	-1.60	-1.56	12	43	2	55	15.672	0.03
0.03	-1.59	-1.55	12	43	3	56	15.597	0.10
0.09	-1.03	-0.99	12	43	4	57	15.638	0.06
0.06	-1.25	-1.20	12	43	5	58	15.628	0.07
0.07	-1.18	-1.14	12	43	6	59	15.762	-0.06
-0.06	ERR	ERR	12	43	7	60	15.758	-0.06
-0.05	ERR	ERR	12	43	8	61	15.621	0.08
0.07	-1.15	-1.10	12	43	9	62	15.539	0.16
0.15	-0.84	-0.79	12	43	10	63	15.729	-0.03
-0.03	ERR	ERR	12	43	11	64	15.690	0.01
0.01	-2.06	-2.02	12	43	12	65	15.838	-0.14
-0.13	ERR	ERR	12	43	13	66	15.873	-0.17
-0.16	ERR	ERR	12	43	14	67	15.603	0.10
0.09	-1.05	-1.01	12	43	15	68	15.840	-0.14
-0.13	ERR	ERR	12	43	16	69	15.811	-0.11
-0.10	ERR	ERR	12	43	17	70	15.605	0.09
0.09	-1.07	-1.02	12	43	18	71	15.853	-0.15
-0.14	ERR	ERR	12	43	19	72	15.859	-0.16
-0.14	ERR	ERR	12	43	20	73	15.890	-0.19
-0.17	ERR	ERR	12	43	21	74	15.854	-0.15
-0.14	ERR	ERR	12	43	22	75	15.760	-0.06
-0.05	ERR	ERR	12	43	23	76	15.893	-0.19
-0.18	ERR	ERR	12	43	24	77	15.677	0.02
0.02	-1.68	-1.64						

OW-19A.TXT

0.06	-1.24	-1.20	12	43	25	78	15.636	0.06
------	-------	-------	----	----	----	----	--------	------

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 4.65E-02 CM/SEC FALLING

OW-21.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-21

DATE= 11/06/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 12 INCHES
 OPEN INTERVAL= 10.0 FEET
 INITIAL WATER ABOVE TRANS.= 9.93 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD								
1.00	0.00	0.15	9	42	54	0	11.349	1.42
0.93	-0.03	0.12	9	42	56	2	11.251	1.32
0.93 *	-0.03	0.12	9	42	58	4	11.257	1.32
0.88	-0.05	0.10	9	43	0	6	11.182	1.25
0.83	-0.08	0.07	9	43	2	8	11.114	1.18
0.78	-0.11	0.04	9	43	4	10	11.038	1.11
0.74	-0.13	0.02	9	43	6	12	10.974	1.04
0.71	-0.15	0.01	9	43	8	14	10.945	1.01
0.68	-0.17	-0.02	9	43	10	16	10.896	0.96
0.64	-0.20	-0.05	9	43	12	18	10.832	0.90
0.60	-0.22	-0.07	9	43	14	20	10.789	0.86
0.57	-0.25	-0.09	9	43	16	22	10.738	0.81
0.54	-0.27	-0.12	9	43	18	24	10.695	0.76
0.51	-0.29	-0.14	9	43	20	26	10.659	0.73
0.49 *	-0.31	-0.16	9	43	22	28	10.628	0.70
0.46	-0.34	-0.19	9	43	24	30	10.585	0.65
0.44	-0.36	-0.21	9	43	26	32	10.555	0.62
0.42	-0.38	-0.23	9	43	28	34	10.521	0.59
0.40	-0.40	-0.25	9	43	30	36	10.493	0.56

0W-21.TXT							
0.38	-0.43	-0.27	9	43	32	38	10.463
0.35	-0.45	-0.30	9	43	34	40	10.434
0.34	-0.47	-0.32	9	43	36	42	10.408
0.32	-0.49	-0.34	9	43	38	44	10.387
0.32	-0.50	-0.35	9	43	40	46	10.384
0.30	-0.52	-0.37	9	43	42	48	10.360
0.28	-0.56	-0.41	9	43	44	50	10.323
0.27	-0.57	-0.42	9	43	46	52	10.312
0.25	-0.61	-0.46	9	43	48	54	10.282
0.24	-0.63	-0.48	9	43	50	56	10.267
0.22	-0.65	-0.50	9	43	52	58	10.250
0.21	-0.67	-0.52	9	43	54	60	10.235
0.21	-0.69	-0.53	9	43	56	62	10.224
0.19	-0.72	-0.57	9	43	58	64	10.203
0.19	-0.73	-0.58	9	44	0	66	10.195
0.17	-0.76	-0.61	9	44	2	68	10.179
0.16	-0.79	-0.64	9	44	4	70	10.162
0.16	-0.81	-0.66	9	44	6	72	10.152
0.14	-0.84	-0.69	9	44	8	74	10.137
0.14	-0.86	-0.71	9	44	10	76	10.128
0.13	-0.88	-0.73	9	44	12	78	10.119
0.13	-0.89	-0.74	9	44	14	80	10.115
0.12	-0.92	-0.76	9	44	16	82	10.104
0.12	-0.93	-0.78	9	44	18	84	10.099
0.10	-1.02	-0.87	9	44	25	91	10.067
0.09	-1.05	-0.90	9	44	30	96	10.059
			9	44	35	101	10.044
				Page 2			0.11

OW-21.TXT

0.08	-1.10	-0.95		9	44	40	106	10.019	0.09
0.06	-1.21	-1.06		9	44	45	111	10.015	0.08
0.06	-1.23	-1.08		9	44	50	116	10.022	0.09
0.06	-1.20	-1.05		9	44	55	121	9.993	0.06
0.04	-1.36	-1.21		9	45	0	126	9.990	0.06
0.04	-1.39	-1.24		9	45	5	131	9.980	0.05
0.03	-1.47	-1.31		9	45	10	136	9.977	0.04
0.03	-1.50	-1.35		9	45	15	141	9.963	0.03
0.02	-1.66	-1.51		9	45	20	146	9.966	0.03
0.02	-1.62	-1.47		9	45	25	151	9.958	0.03
0.02	-1.73	-1.58		9	45	30	156	9.954	0.02
0.02	-1.81	-1.65		9	45	35	161	9.952	0.02
0.01	-1.85	-1.70		9	45	40	166	9.949	0.02
0.01	-1.92	-1.77		9	45	45	171	9.951	0.02
0.01	-1.87	-1.72		9	45	50	176	9.938	0.01
0.00	-2.36	-2.20		9	45	55	181	9.935	0.00
0.00	-2.67	-2.52		9	46	6	192	9.946	0.01
0.01	-2.02	-1.87		9	46	8	194	9.933	0.00
0.00	-3.18	-3.03		9	46	10	196	9.936	0.00
0.00	-2.56	-2.40		9	46	12	198	9.932	0.00
0.00	-3.47	-3.32	RISING HEAD	9	46	44	0	8.860	1.07
1.00 **	0.00	0.03		9	46	46	2	8.910	1.02
0.95	-0.02	0.01		9	46	48	4	8.959	0.97
0.91	-0.04	-0.01		9	46	50	6	9.006	0.93
0.86	-0.06	-0.03		9	46	52	8	9.052	0.88
0.82	-0.09	-0.06		9	46	54	10	9.095	0.84
0.78	-0.11	-0.08		9	46	56	12	9.135	0.80
0.74	-0.13	-0.10		9	47	2	18	9.232	0.70
0.65	-0.19	-0.16		9	47	4	20	9.271	0.66
0.62	-0.21	-0.18		9	47	6	22	9.296	0.64
0.59	-0.23	-0.20		9	47	8	24	9.332	0.60

OW-21.TXT							
0.56	-0.25	-0.22	9	47	10	26	9.358
0.54 **	-0.27	-0.24	9	47	12	28	9.400
0.50	-0.30	-0.27	9	47	14	30	9.398
0.50	-0.30	-0.27					
0.47	-0.33	-0.30	9	47	16	32	9.430
0.45	-0.35	-0.32	9	47	18	34	9.454
0.42	-0.37	-0.34	9	47	20	36	9.478
0.40	-0.40	-0.37	9	47	22	38	9.505
0.39	-0.41	-0.38	9	47	24	40	9.517
0.37	-0.43	-0.40	9	47	26	42	9.535
0.35	-0.45	-0.42	9	47	28	44	9.554
0.34	-0.47	-0.44	9	47	30	46	9.572
0.32	-0.49	-0.46	9	47	32	48	9.587
0.31	-0.52	-0.48	9	47	34	50	9.605
0.28	-0.55	-0.52	9	47	36	52	9.632
0.28	-0.55	-0.52	9	47	38	54	9.628
0.27	-0.56	-0.53	9	47	40	56	9.640
0.25	-0.59	-0.56	9	47	42	58	9.659
0.25	-0.60	-0.57	9	47	44	60	9.666
0.24	-0.63	-0.60	9	47	46	62	9.679
0.23	-0.64	-0.61	9	47	48	64	9.688
0.21	-0.67	-0.64	9	47	50	66	9.704
0.21	-0.68	-0.65	9	47	52	68	9.708
0.20	-0.70	-0.67	9	47	54	70	9.717
0.20	-0.70	-0.67	9	47	56	72	9.719
0.19	-0.73	-0.70	9	47	58	74	9.732
0.18	-0.75	-0.72	9	48	0	76	9.742

			9	48	2	78	9.760	0.17
0.16	-0.79	-0.76	9	48	4	80	9.768	0.16
0.15	-0.82	-0.78	9	48	6	82	9.765	0.17
0.16	-0.81	-0.78	9	48	8	84	9.788	0.14
0.13	-0.87	-0.84	9	48	10	86	9.778	0.15
0.14	-0.84	-0.81	9	48	12	88	9.784	0.15
0.14	-0.86	-0.83	9	48	14	90	9.797	0.13
0.13	-0.90	-0.87	9	48	16	92	9.799	0.13
0.12	-0.91	-0.87	9	48	18	94	9.805	0.13
0.12	-0.93	-0.90	9	48	20	96	9.814	0.12
0.11	-0.96	-0.93	9	48	30	106	9.823	0.11
0.10	-0.99	-0.96	9	48	35	111	9.830	0.10
0.09	-1.02	-0.99	9	48	40	116	9.842	0.09
0.08	-1.07	-1.04	9	48	45	121	9.849	0.08
0.08	-1.11	-1.08	9	48	50	126	9.864	0.07
0.06	-1.20	-1.17	9	48	55	131	9.857	0.08
0.07	-1.15	-1.12	9	49	0	136	9.875	0.06
0.05	-1.28	-1.25	9	49	5	141	9.883	0.05
0.05	-1.34	-1.31	9	49	15	151	9.884	0.05
0.05	-1.34	-1.31	9	49	20	156	9.899	0.03
0.03	-1.52	-1.49	9	49	25	161	9.896	0.04
0.03	-1.47	-1.44	9	49	30	166	9.899	0.03
0.03	-1.51	-1.48	9	49	35	171	9.897	0.04
0.03	-1.49	-1.46	9	49	40	176	9.905	0.03
0.03	-1.60	-1.57	9	49	45	181	9.909	0.02
0.02	-1.67	-1.64	9	49	50	186	9.909	0.02
0.02	-1.66	-1.63	9	49	55	191	9.918	0.01
0.01	-1.89	-1.86	9	50	0	196	9.914	0.02
0.02	-1.78	-1.75	9	50	5	201	9.909	0.02
0.02	-1.66	-1.63	9	50	10	206	9.911	0.02
0.02	-1.71	-1.68	9	50	15	211	9.905	0.03
0.02	-1.60	-1.57						

OW-21.TXT

--

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 3.40E-03 CM/SEC FALLING

OW-23.TXT

DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-23

DATE= 11/08/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 14.0 FEET
 INITIAL WATER ABOVE TRANS.= 7.6 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00 *	0.00	0.15	14	7	30	0	9.006	1.41
0.98	-0.01	0.14	14	7	32	2	8.978	1.38
0.97	-0.02	0.13	14	7	34	4	8.957	1.36
0.95	-0.02	0.12	14	7	36	6	8.929	1.33
0.94	-0.03	0.12	14	7	38	8	8.915	1.31
0.93	-0.03	0.11	14	7	40	10	8.902	1.30
0.88	-0.06	0.09	14	7	42	12	8.831	1.23
0.85	-0.07	0.08	14	7	44	14	8.790	1.19
0.95	-0.02	0.12	14	7	46	16	8.932	1.33
0.84	-0.08	0.07	14	7	48	18	8.776	1.18
0.79	-0.11	0.04	14	7	50	20	8.704	1.10
0.83	-0.08	0.07	14	7	52	22	8.769	1.17
0.83	-0.08	0.07	14	7	54	24	8.771	1.17
0.73	-0.14	0.01	14	7	56	26	8.629	1.03
0.71	-0.15	-0.00	14	8	0	30	8.678	1.08
0.77	-0.12	0.03	14	8	2	32	8.608	1.01

OW-23.TXT

0.72	-0.14	0.00	14	8	4	34	8.814	1.21
0.86	-0.06	0.08	14	8	6	36	8.756	1.16
0.82	-0.09	0.06	14	8	8	38	8.539	0.94
0.67	-0.18	-0.03	14	8	10	40	8.471	0.87
0.62	-0.21	-0.06	14	8	12	42	8.839	1.24
0.88	-0.05	0.09	14	8	14	44	8.478	0.88
0.62	-0.20	-0.06	14	8	16	46	8.453	0.85
0.61	-0.22	-0.07	14	8	18	48	8.683	1.08
0.77	-0.11	0.03	14	8	20	50	8.382	0.78
0.56	-0.25	-0.11	14	8	22	52	8.504	0.90
0.64	-0.19	-0.04	14	8	24	54	8.596	1.00
0.71	-0.15	-0.00	14	8	26	56	8.622	1.02
0.73	-0.14	0.01	14	8	28	58	8.330	0.73
0.52	-0.28	-0.14	14	8	30	60	8.450	0.85
0.60	-0.22	-0.07	14	8	32	62	8.472	0.87
0.62	-0.21	-0.06	14	8	34	64	8.638	1.04
0.74	-0.13	0.02	14	8	36	66	8.440	0.84
0.60	-0.22	-0.08	14	8	38	68	8.441	0.84
0.60	-0.22	-0.08						

0.45	-0.34	-0.20	14	8	40	70	8.237	0.64
0.45	-0.35	-0.20	14	8	42	72	8.232	0.63
0.46 *	-0.34	-0.19	14	8	44	74	8.241	0.64
0.72	-0.15	0.00	14	8	46	76	8.606	1.01
0.41	-0.39	-0.24	14	8	48	78	8.178	0.58
0.52	-0.28	-0.13	14	8	50	80	8.333	0.73
0.41	-0.39	-0.24	14	8	52	82	8.177	0.58
0.45	-0.35	-0.20	14	8	54	84	8.228	0.63

OW-23.TXT							
0.53	-0.28	-0.13	14	8	56	86	8.340
0.40	-0.40	-0.25	14	8	58	88	8.159
0.47	-0.33	-0.18	14	9	0	90	8.263
0.51	-0.29	-0.14	14	9	2	92	8.320
0.40	-0.40	-0.25	14	9	4	94	8.158
0.40	-0.40	-0.25	14	9	6	96	8.156
0.43	-0.37	-0.22	14	9	8	98	8.205
0.33	-0.48	-0.33	14	9	10	100	8.069
0.48	-0.32	-0.17	14	9	12	102	8.280
0.32	-0.50	-0.35	14	9	14	104	8.047
0.31	-0.50	-0.36	14	9	16	106	8.040
0.33	-0.48	-0.33	14	9	18	108	8.067
0.50	-0.30	-0.16	14	9	20	110	8.298
0.29	-0.54	-0.39	14	9	22	112	8.005
0.42	-0.37	-0.23	14	9	24	114	8.193
0.50	-0.30	-0.16	14	9	26	116	8.298
0.48	-0.32	-0.17	14	9	28	118	8.275
0.33	-0.48	-0.33	14	9	30	120	8.064
0.27	-0.56	-0.42	14	9	32	122	7.984
0.25	-0.59	-0.45	14	9	34	124	7.958
0.53	-0.28	-0.13	14	9	36	126	8.339
0.52	-0.28	-0.14	14	9	38	128	8.330
0.41	-0.39	-0.24	14	9	40	130	8.169
0.23	-0.64	-0.49	14	9	42	132	7.921
0.22	-0.65	-0.50	14	9	44	134	7.916
0.30	-0.52	-0.37	14	9	46	136	8.023
0.39	-0.41	-0.26	14	9	48	138	8.148
0.42	-0.37	-0.22	14	9	50	140	8.197
0.42	-0.38	-0.23	14	9	52	142	8.192
0.36	-0.44	-0.29	14	9	54	144	8.111
0.18	-0.74	-0.59	14	9	56	146	7.857
				9	58	148	8.072
							0.47

OW-23.TXT

0.34	-0.47	-0.33	14	10	0	150	7.874	0.27
0.19	-0.71	-0.56	14	10	2	152	8.043	0.44
0.32	-0.50	-0.35	14	10	4	154	8.030	0.43
0.31	-0.51	-0.37	14	10	6	156	8.058	0.46
0.33	-0.49	-0.34	14	10	8	158	7.986	0.39
0.27	-0.56	-0.41	14	10	10	160	7.910	0.31
0.22	-0.66	-0.51	14	10	12	162	7.810	0.21
0.15	-0.83	-0.68	14	10	14	164	7.810	0.21
0.15	-0.83	-0.68	14	10	16	166	7.821	0.22
0.16	-0.80	-0.66	14	10	18	168	8.130	0.53
0.38	-0.42	-0.28	14	10	20	170	7.840	0.24
0.17	-0.77	-0.62	14	10	22	172	7.790	0.19
0.13	-0.87	-0.72	14	10	24	174	8.150	0.55
0.39	-0.41	-0.26	14	10	26	176	7.898	0.30
0.21	-0.67	-0.53	14	10	28	178	8.111	0.51
0.36	-0.44	-0.29	14	10	30	180	7.795	0.20
0.14	-0.86	-0.71						

0.39	-0.41	-0.26	14	10	32	182	8.148	0.55
0.25	-0.60	-0.45	14	10	34	184	7.952	0.35
0.33	-0.48	-0.33	14	10	36	186	8.065	0.47
0.10	-1.00	-0.85	14	10	38	188	7.742	0.14
0.39	-0.41	-0.26	14	10	40	190	8.152	0.55
0.11	-0.94	-0.80	14	10	42	192	7.760	0.16
0.27	-0.57	-0.42	14	10	44	194	7.977	0.38
0.18	-0.74	-0.59	14	10	46	196	7.856	0.26
0.14	-0.84	-0.69	14	10	48	198	7.803	0.20
0.26	-0.58	-0.43	14	10	50	200	7.972	0.37

OW-23.TXT							
			14	10	52	202	7.982
0.27	-0.57	-0.42	14	10	54	204	8.019
0.30	-0.53	-0.38	14	10	56	206	8.001
0.29	-0.54	-0.40	14	10	58	208	7.978
0.27	-0.57	-0.42	14	11	0	210	8.115
0.37	-0.44	-0.29	14	11	2	212	7.915
0.22	-0.65	-0.50	14	11	4	214	7.978
0.27	-0.57	-0.42	14	11	6	216	7.775
0.12	-0.90	-0.76	14	11	16	226	7.940
0.24	-0.62	-0.47	14	11	18	228	7.685
0.06	-1.22	-1.07	14	11	20	230	7.670
0.05	-1.30	-1.15	RISING HEAD TEST				
			14	11	26	0	6.145
1.00 **	0.00	0.16	14	11	28	2	6.246
0.93	-0.03	0.13	14	11	30	4	6.481
0.77	-0.11	0.05	14	11	32	6	6.490
0.76	-0.12	0.05	14	11	34	8	6.413
0.82	-0.09	0.07	14	11	36	10	6.230
0.94	-0.03	0.14	14	11	38	12	6.261
0.92	-0.04	0.13	14	11	40	14	6.408
0.82	-0.09	0.08	14	11	42	16	6.322
0.88	-0.06	0.11	14	11	44	18	6.607
0.68	-0.17	-0.00	14	11	46	20	6.689
0.63	-0.20	-0.04	14	11	48	22	6.453
0.79	-0.10	0.06	14	11	50	24	6.580
0.70	-0.15	0.01	14	11	52	26	6.675
0.64	-0.20	-0.03	14	11	54	28	6.627
0.67	-0.17	-0.01	14	11	56	30	6.598
0.69	-0.16	0.00	14	11	58	32	6.849
0.52	-0.29	-0.12	14	12	0	34	6.871
0.50	-0.30	-0.14	14	12	2	36	6.786
0.56	-0.25	-0.09	14	12	4	38	6.596
0.69	-0.16	0.00					1.00

				14	12	6	40	6.766	0.83
0.57	-0.24	-0.08		14	12	8	42	6.768	0.83
0.57	-0.24	-0.08		14	12	10	44	6.664	0.94
0.64	-0.19	-0.03		14	12	12	46	6.927	0.67
0.46	-0.34	-0.17		14	12	14	48	6.706	0.89
0.61	-0.21	-0.05		14	12	16	50	6.729	0.87
0.60	-0.22	-0.06		14	12	18	52	6.970	0.63
0.43	-0.36	-0.20		14	12	20	54	6.980	0.62
0.43	-0.37	-0.21		14	12	22	56	6.795	0.80
0.55	-0.26	-0.09		14	12	24	58	7.056	0.54
0.37	-0.43	-0.26		14	12	26	60	6.845	0.75
0.52	-0.29	-0.12		14	12	28	62	6.948	0.65
0.45	-0.35	-0.19		14	12	30	64	6.909	0.69
0.47	-0.32	-0.16		14	12	32	66	7.118	0.48
0.33	-0.48	-0.32							

				14	12	34	68	6.883	0.72
0.49	-0.31	-0.14		14	12	36	70	7.012	0.59
0.40 **	-0.39	-0.23		14	12	38	72	7.245	0.36
0.24	-0.61	-0.45		14	12	40	74	7.207	0.39
0.27	-0.57	-0.41		14	12	42	76	7.264	0.34
0.23	-0.64	-0.47		14	12	44	78	7.277	0.32
0.22	-0.65	-0.49		14	12	46	80	7.176	0.42
0.29	-0.54	-0.37		14	12	48	82	7.281	0.32
0.22	-0.66	-0.50		14	12	50	84	7.005	0.60
0.41	-0.39	-0.23		14	12	52	86	7.165	0.44
0.30	-0.52	-0.36		14	12	54	88	7.019	0.58
0.40	-0.40	-0.24		14	12	56	90	7.059	0.54
0.37	-0.43	-0.27		14	12	58	92	7.282	0.32

OW-23.TXT

0.22	-0.66	-0.50	14	13	0	94	7.351	0.25
0.17	-0.77	-0.60	14	13	2	96	7.143	0.46
0.31	-0.50	-0.34	14	13	4	98	7.390	0.21
0.14	-0.84	-0.68	14	13	6	100	7.484	0.12
0.08	-1.10	-0.94	14	13	8	102	7.399	0.20
0.14	-0.86	-0.70	14	13	10	104	7.261	0.34
0.23	-0.63	-0.47	14	13	12	106	7.125	0.48
0.33	-0.49	-0.32	14	13	14	108	7.383	0.22
0.15	-0.83	-0.66	14	13	16	110	7.369	0.23
0.16	-0.80	-0.64	14	13	18	112	7.265	0.33
0.23	-0.64	-0.48	14	13	20	114	7.188	0.41
0.28	-0.55	-0.39	14	13	22	116	7.437	0.16
0.11	-0.95	-0.79	14	13	24	118	7.205	0.39
0.27	-0.57	-0.40	14	13	26	120	7.237	0.36
0.25	-0.60	-0.44	14	13	28	122	7.465	0.14
0.09	-1.03	-0.87	14	13	30	124	7.541	0.06
0.04	-1.39	-1.23	14	13	32	126	7.402	0.20
0.14	-0.87	-0.70	14	13	34	128	7.560	0.04
0.03	-1.56	-1.39	14	13	36	130	7.420	0.18
0.12	-0.91	-0.74	14	13	38	132	7.400	0.20
0.14	-0.86	-0.70	14	13	40	134	7.277	0.32
0.22	-0.65	-0.49	14	13	42	136	7.441	0.16
0.11	-0.96	-0.80	14	13	44	138	7.442	0.16
0.11	-0.96	-0.80	14	13	46	140	7.571	0.03
0.02	-1.70	-1.54	14	13	48	142	7.585	0.01
0.01	-1.99	-1.83	14	13	50	144	7.419	0.18
0.12	-0.91	-0.74	14	13	52	146	7.509	0.09
0.06	-1.20	-1.04	14	13	54	148	7.465	0.14
0.09	-1.03	-0.87	14	13	56	150	7.584	0.02
0.01	-1.96	-1.80	14	13	58	152	7.645	-0.04
-0.03	ERR	ERR	14	14	0	154	7.322	0.28
0.19	-0.72	-0.56						

OW-23.TXT								
0.20	-0.69	-0.53	14	14	2	156	7.304	0.30
0.02	-1.70	-1.54	14	14	4	158	7.571	0.03
-0.03	ERR	ERR	14	14	6	160	7.640	-0.04
0.05	-1.31	-1.15	14	14	8	162	7.528	0.07
0.11	-0.94	-0.78	14	14	10	164	7.434	0.17
0.18	-0.75	-0.58	14	14	12	166	7.340	0.26
0.17	-0.77	-0.61	14	14	14	168	7.355	0.24
0.09	-1.03	-0.86	14	14	16	170	7.463	0.14
0.08	-1.09	-0.93	14	14	18	172	7.481	0.12
0.17	-0.78	-0.62	14	14	20	174	7.358	0.24
0.12	-0.94	-0.77	14	14	22	176	7.431	0.17
0.05	-1.31	-1.15	14	14	24	178	7.529	0.07
<hr/>								
0.12	-0.92	-0.76	14	14	26	180	7.426	0.17
0.06	-1.22	-1.06	14	14	28	182	7.512	0.09
-0.05	ERR	ERR	14	14	30	184	7.678	-0.08
0.14	-0.86	-0.69	14	14	32	186	7.398	0.20
-0.07	ERR	ERR	14	14	34	188	7.705	-0.11
0.11	-0.94	-0.78	14	14	36	190	7.434	0.17
-0.06	ERR	ERR	14	14	38	192	7.685	-0.08
0.07	-1.13	-0.96	14	14	40	194	7.491	0.11
-0.08	ERR	ERR	14	14	42	196	7.720	-0.12
-0.13	ERR	ERR	14	14	44	198	7.791	-0.19
0.09	-1.04	-0.87	14	14	46	200	7.466	0.13
0.09	-1.03	-0.87	14	14	48	202	7.465	0.14
0.12	-0.93	-0.77	14	14	50	204	7.429	0.17

OW-23.TXT

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.13E-03 CM/SEC FALLING

OW-30A.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-30A

DATE= 11/07/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 8.63 FEET
 INITIAL WATER ABOVE TRANS.= 7.45 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00 *	0.00	0.08	15	58	34	0	8.651	1.20
0.95	-0.02	0.06	15	58	36	2	8.593	1.14
0.76	-0.12	-0.04	15	58	38	4	8.360	0.91
0.60	-0.22	-0.14	15	58	40	6	8.169	0.72
0.52	-0.28	-0.20	15	58	42	8	8.075	0.62
0.42	-0.38	-0.30	15	58	44	10	7.950	0.50
0.38	-0.42	-0.34	15	58	46	12	7.904	0.45
0.29	-0.54	-0.46	15	58	48	14	7.796	0.35
0.25 *	-0.61	-0.53	15	58	50	16	7.745	0.29
0.24	-0.62	-0.54	15	58	52	18	7.737	0.29
0.18	-0.75	-0.67	15	58	54	20	7.666	0.22
0.16	-0.80	-0.72	15	58	56	22	7.642	0.19
0.13	-0.89	-0.81						
0.12	-0.93	-0.85	15	59	0	26	7.591	0.14

			15	59	2	28	7.579	0.13
0.11	-0.97	-0.89	15	59	4	30	7.582	0.13
0.11	-0.96	-0.88	15	59	6	32	7.549	0.10
0.08	-1.09	-1.01	15	59	8	34	7.539	0.09
0.07	-1.13	-1.05	15	59	10	36	7.529	0.08
0.07	-1.18	-1.10	15	59	12	38	7.527	0.08
0.06	-1.19	-1.11	15	59	14	40	7.507	0.06
0.05	-1.32	-1.24	15	59	16	42	7.502	0.05
0.04	-1.36	-1.28	15	59	18	44	7.523	0.07
0.06	-1.22	-1.14	15	59	20	46	7.528	0.08
0.07	-1.19	-1.11	15	59	22	48	7.498	0.05
0.04	-1.40	-1.32	15	59	24	50	7.489	0.04
0.03	-1.48	-1.40	15	59	26	52	7.496	0.05
0.04	-1.42	-1.34	15	59	28	54	7.513	0.06
0.05	-1.28	-1.20	15	59	30	56	7.492	0.04
0.04	-1.45	-1.37	15	59	32	58	7.485	0.03
0.03	-1.54	-1.46	15	59	34	60	7.481	0.03
0.03	-1.59	-1.51	15	59	36	62	7.483	0.03
0.03	-1.56	-1.48	15	59	38	64	7.518	0.07
0.06	-1.25	-1.17	15	59	40	66	7.480	0.03
0.02	-1.61	-1.53	15	59	42	68	7.492	0.04
0.04	-1.45	-1.37	15	59	44	70	7.491	0.04
0.03	-1.47	-1.39	15	59	46	72	7.490	0.04
0.03	-1.48	-1.40	15	59	48	74	7.489	0.04
0.03	-1.49	-1.41	15	59	50	76	7.487	0.04
0.03	-1.51	-1.43	15	59	52	78	7.480	0.03
0.03	-1.60	-1.52	15	59	54	80	7.491	0.04
0.03	-1.47	-1.39	16	0	5	91	7.488	0.04
0.03	-1.50	-1.42	16	0	10	96	7.486	0.04
0.03	-1.52	-1.44	16	0	15	101	7.511	0.06
0.05	-1.29	-1.21	16	0	20	106	7.514	0.06
0.05	-1.27	-1.19	16	0	25	111	7.496	0.05

OW-30A.TXT

0.04	-1.42	-1.34	16	0	30	116	7.495	0.05
0.04	-1.43	-1.35	16	0	35	121	7.500	0.05
0.04	-1.38	-1.30	16	0	40	126	7.503	0.05
0.04	-1.36	-1.28	16	0	45	131	7.507	0.06
0.05	-1.32	-1.25	16	0	50	136	7.509	0.06
0.05	-1.31	-1.23	16	0	55	141	7.533	0.08
0.07	-1.16	-1.08	16	1	0	146	7.536	0.09
0.07	-1.14	-1.06	16	1	5	151	7.515	0.07
0.05	-1.27	-1.19	16	1	10	156	7.516	0.07
0.06	-1.26	-1.18	16	1	15	161	7.520	0.07
0.06	-1.23	-1.15	16	1	20	166	7.521	0.07
0.06	-1.23	-1.15	16	1	25	171	7.524	0.07
0.06	-1.21	-1.13	16	1	30	176	7.526	0.08
0.06	-1.20	-1.12	16	1	35	181	7.548	0.10
0.08	-1.09	-1.01	16	1	40	186	7.529	0.08
0.07	-1.18	-1.10	16	1	45	191	7.530	0.08
0.07	-1.18	-1.10	16	1	50	196	7.530	0.08
0.07	-1.18	-1.10	16	2	6	212	7.533	0.08
0.07	-1.16	-1.08	16	2	14	220	7.556	0.11
0.09	-1.06	-0.98	16	2	16	222	7.533	0.08
0.07	-1.16	-1.08	16	2	18	224	7.552	0.10
0.09	-1.07	-0.99	16	2	20	226	7.535	0.08
0.07	-1.15	-1.07						

RISING HEAD TEST

1.00 **	0.00	0.06	16	2	22	0	6.292	1.16
0.85	-0.07	-0.01	16	2	24	2	6.470	0.98
0.70	-0.15	-0.09	16	2	26	4	6.635	0.81

OW-30A.TXT								
0.60	-0.22	-0.16	16	2	30	8	6.848	0.60
0.52	-0.28	-0.22	16	2	32	10	6.923	0.53
0.45	-0.34	-0.28	16	2	34	12	6.975	0.47
0.41	-0.39	-0.32	16	2	36	14	7.038	0.41
0.36	-0.45	-0.38	16	2	38	16	7.083	0.37
0.32	-0.50	-0.44	16	2	40	18	7.129	0.32
0.28	-0.56	-0.49	16	2	42	20	7.162	0.29
0.25 **	-0.60	-0.54	16	2	44	22	7.198	0.25
0.22	-0.66	-0.60	16	2	46	24	7.226	0.22
0.19	-0.71	-0.65	16	2	48	26	7.260	0.19
0.16	-0.79	-0.72	16	2	50	28	7.268	0.18
0.16	-0.80	-0.74	16	2	52	30	7.293	0.16
0.14	-0.87	-0.80	16	2	54	32	7.312	0.14
0.12	-0.92	-0.86	16	2	56	34	7.319	0.13
0.11	-0.95	-0.88	16	2	58	36	7.335	0.11
0.10	-1.00	-0.94	16	3	0	38	7.371	0.08
0.07	-1.16	-1.10	16	3	2	40	7.366	0.08
0.07	-1.14	-1.08	16	3	4	42	7.379	0.07
0.06	-1.21	-1.15	16	3	6	44	7.374	0.08
0.07	-1.18	-1.12	16	3	8	46	7.402	0.05
0.04	-1.39	-1.32	16	3	10	48	7.399	0.05
0.04	-1.36	-1.29	16	3	12	50	7.422	0.03
0.02	-1.61	-1.55	16	3	14	52	7.402	0.05
0.04	-1.39	-1.32	16	3	16	54	7.413	0.04
0.03	-1.50	-1.43	16	3	18	56	7.420	0.03
0.03	-1.59	-1.53	16	3	20	58	7.426	0.02
0.02	-1.68	-1.62	16	3	22	60	7.418	0.03
0.03	-1.56	-1.50	16	3	24	62	7.463	-0.01
-0.01	ERR	ERR	16	3	26	64	7.460	-0.01
-0.01	ERR	ERR	16	3	28	66	7.442	0.01
0.01	-2.16	-2.10	16	3	30	68	7.431	0.02
0.02	-1.79	-1.73						

				16	3	32	70	7.435	0.01
0.01	-1.90	-1.84		16	3	34	72	7.476	-0.03
-0.02	ERR	ERR		16	3	36	74	7.443	0.01
0.01	-2.23	-2.16		16	3	38	76	7.445	0.00
0.00	-2.39	-2.33		16	3	40	78	7.442	0.01
0.01	-2.14	-2.08							

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 4.04E-02 CM/SEC FALLING

OW-30B.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-30B

		DATE= 11/07/90
CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	12.83 FEET
INITIAL WATER ABOVE TRANS.=		7.6 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00 *	0 0.066498		16	20	50	0	8.765	1.17
0.95	-0.02384 0.042654		16	20	52	2	8.703	1.10
0.91	-0.04082 0.025676		16	20	54	4	8.661	1.06
0.87	-0.05849 0.008007		16	20	56	6	8.619	1.02
0.84	-0.07443 -0.00793		16	20	58	8	8.582	0.98
0.81	-0.09029 -0.02379		16	21	0	10	8.547	0.95
0.78	-0.10644 -0.03994		16	21	2	12	8.512	0.91
0.76	-0.12184 -0.05534		16	21	4	14	8.480	0.88
0.73	-0.13825 -0.07175		16	21	6	16	8.448	0.85
0.70	-0.15347 -0.08697		16	21	8	18	8.419	0.82
0.68 *	-0.16618 -0.09969		16	21	10	20	8.395	0.79
0.66	-0.18134 -0.11484		16	21	12	22	8.368	0.77
0.64	-0.19504 -0.12854		16	21	14	24	8.344	0.74
0.61	-0.21126 -0.14476		16	21	16	26	8.317	0.72

			OW-30B.TXT					
0.60	-0.22380	-0.15730	16	21	18	28	8.296	0.70
0.58	-0.23976	-0.17326	16	21	20	30	8.271	0.67
0.54	-0.26493	-0.19844	16	21	22	32	8.233	0.63
0.54	-0.26878	-0.20228	16	21	24	34	8.228	0.63
0.52	-0.28482	-0.21832	16	21	26	36	8.205	0.60
0.51	-0.29322	-0.22673	16	21	28	38	8.193	0.59
0.49	-0.30760	-0.24111	16	21	30	40	8.174	0.57
0.47	-0.32823	-0.26173	16	21	32	42	8.147	0.55
0.46	-0.33927	-0.27277	16	21	34	44	8.134	0.53
0.44	-0.35240	-0.28590	16	21	36	46	8.118	0.52
0.43	-0.36408	-0.29758	16	21	38	48	8.104	0.50
0.42	-0.37780	-0.31130	16	21	40	50	8.088	0.49
0.41	-0.39177	-0.32527	16	21	42	52	8.073	0.47
0.40	-0.40013	-0.33364	16	21	44	54	8.064	0.46
0.38	-0.42495	-0.35846	16	21	46	56	8.038	0.44
0.37	-0.42794	-0.36145	16	21	48	58	8.035	0.44
0.35	-0.45286	-0.38636	16	21	50	60	8.011	0.41
0.34	-0.46413	-0.39763	16	21	52	62	8.000	0.40
0.34	-0.46670	-0.40020	16	21	54	64	7.998	0.40
0.34	-0.46623	-0.39973	16	21	56	66	7.998	0.40
0.33	-0.47786	-0.41136	16	21	58	68	7.988	0.39
0.30	-0.51840	-0.45190	16	22	0	70	7.953	0.35
0.29	-0.53700	-0.47050	16	22	2	72	7.938	0.34
0.29	-0.53180	-0.46530	16	22	4	74	7.943	0.34
0.28	-0.54817	-0.48167	16	22	6	76	7.930	0.33
0.27	-0.56253	-0.49604	16	22	8	78	7.919	0.32
0.26	-0.58226	-0.51576	16	22	10	80	7.905	0.30
0.26	-0.58165	-0.51515	16	22	12	82	7.905	0.31

OW-30B.TXT

0.27	-0.56224	-0.49574	16	22	14	84	7.919	0.32
0.24	-0.62327	-0.55678	16	22	16	86	7.877	0.28
0.23	-0.62936	-0.56287	16	22	18	88	7.874	0.27
0.22	-0.65246	-0.58596	16	22	20	90	7.859	0.26
0.25	-0.60808	-0.54159	16	22	22	92	7.887	0.29
0.22	-0.65752	-0.59102	16	22	24	94	7.856	0.26
0.21	-0.67044	-0.60394	16	22	26	96	7.849	0.25
0.20	-0.69115	-0.62465	16	22	30	100	7.829	0.23
0.20	-0.70594	-0.63944	16	22	32	102	7.827	0.23
0.19	-0.71043	-0.64393	16	22	34	104	7.814	0.21
0.18	-0.73624	-0.66974	16	22	36	106	7.821	0.22
0.19	-0.72167	-0.65517	16	22	38	108	7.810	0.21
0.18	-0.74504	-0.67855	16	22	40	110	7.835	0.24
0.20	-0.69470	-0.62820	16	22	42	112	7.799	0.20
0.17	-0.76834	-0.70184	16	22	44	114	7.792	0.19
0.17	-0.78217	-0.71567	16	22	46	116	7.786	0.19
0.16	-0.79645	-0.72996	16	22	55	125	7.803	0.20
0.17	-0.75952	-0.69302	16	23	0	130	7.755	0.16
0.13	-0.87530	-0.80880	16	23	5	135	7.747	0.15
0.13	-0.89936	-0.83287	16	23	10	140	7.738	0.14
0.12	-0.92687	-0.86037	16	23	15	145	7.728	0.13
0.11	-0.95768	-0.89119	16	23	20	150	7.723	0.12
0.11	-0.97774	-0.91124	16	23	25	155	7.715	0.12
0.10	-1.00519	-0.93869	16	23	30	160	7.740	0.14
0.12	-0.91950	-0.85300	16	23	35	165	7.705	0.10
0.09	-1.04590	-0.97940	16	23	40	170	7.698	0.10
0.08	-1.07343	-1.00694	16	23	45	175	7.694	0.09
0.08	-1.09479	-1.02830	16	23	50	180	7.727	0.13
0.11	-0.96206	-0.89556	16	23	55	185	7.684	0.08
0.07	-1.14095	-1.07445						

			OW-30B, TXT				
0.07	-1.13002	-1.06352	16	24	0	190	7.686
0.10	-1.00844	-0.94194	16	24	5	195	7.714
0.07	-1.16718	-1.10069	16	24	10	200	7.679
0.07	-1.16601	-1.09951	16	24	15	205	7.680
0.07	-1.18519	-1.11869	16	24	20	210	7.676
0.06	-1.21042	-1.14392	16	24	25	215	7.672
0.06	-1.21828	-1.15178	16	24	30	220	7.671
0.09	-1.05671	-0.99021	16	24	35	225	7.702
0.06	-1.24276	-1.17626	16	24	40	230	7.667
0.06	-1.25554	-1.18904	16	24	45	235	7.665
0.06	-1.25554	-1.18904	16	24	52	242	7.665
0.06	-1.23171	-1.16521	16	24	54	244	7.668
0.06	-1.23171	-1.16521	16	24	56	246	7.657
0.05	-1.30915	-1.24266	16	24	58	248	7.669
0.06	-1.22629	-1.15979	16	25	0	250	7.660
0.05	-1.29002	-1.22352	16	25	2	252	7.668
0.06	-1.23171	-1.16521	16	25	4	254	7.670
0.06	-1.22360	-1.15710	16	25	6	256	7.663
0.05	-1.27020	-1.20370	16	25	8	258	7.661
0.05	-1.27923	-1.21273	16	25	18	268	7.697
0.08	-1.07916	-1.01266	16	25	20	270	7.669
0.06	-1.22899	-1.16249	RISING HEAD TEST				
1.00 **	0	-0.05616	16	25	22	0	6.721
0.96	-0.01666	-0.07282	16	25	24	2	6.754
0.93	-0.02975	-0.08592	16	25	26	4	6.780
0.89	-0.04999	-0.10616	16	25	28	6	6.817
0.88	-0.05671	-0.11288	16	25	30	8	6.829
							0.77

			OW-30B.TXT				
0.86	-0.06798	-0.12415	16	25	32	10	6.849
0.82	-0.08519	-0.14136	16	25	34	12	6.878
0.81	-0.09157	-0.14773	16	25	36	14	6.888
0.79	-0.10325	-0.15942	16	25	38	16	6.907
0.76	-0.11665	-0.17282	16	25	40	18	6.928
0.75	** -0.12520	-0.18137	16	25	42	20	6.941
0.74	-0.13363	-0.18980	16	25	44	22	6.954
0.71	-0.14831	-0.20448	16	25	46	24	6.976
0.69	-0.15828	-0.21445	16	25	48	26	6.990
0.68	-0.17052	-0.22669	16	25	50	28	7.007
0.65	-0.18377	-0.23993	16	25	52	30	7.024
0.64	-0.19161	-0.24778	16	25	54	32	7.035
0.62	-0.20877	-0.26494	16	25	56	34	7.057
0.61	-0.21447	-0.27064	16	25	58	36	7.064
0.58	-0.23458	-0.29075	16	26	0	38	7.088
0.58	-0.24026	-0.29643	16	26	2	40	7.095
0.56	-0.25300	-0.30916	16	26	4	42	7.109
0.55	-0.26163	-0.31780	16	26	6	44	7.119
0.53	-0.27342	-0.32959	16	26	8	46	7.132
0.51	-0.28903	-0.34520	16	26	10	48	7.148
0.50	-0.29674	-0.35291	16	26	12	50	7.156
0.48	-0.32161	-0.37777	16	26	14	52	7.181
0.48	-0.32250	-0.37866	16	26	16	54	7.182
0.47	-0.32361	-0.37978	16	26	18	56	7.183
0.45	-0.34234	-0.39851	16	26	20	58	7.201
0.44	-0.35369	-0.40986	16	26	22	60	7.211
0.42	-0.37733	-0.43350	16	26	24	62	7.231
0.42	-0.37961	-0.43578	16	26	26	64	7.233
0.40	-0.39699	-0.45316	16	26	28	66	7.248
0.38	-0.41926	-0.47543	16	26	30	68	7.265
0.37	-0.43285	-0.48901	16	26	32	70	7.276
			16	26	34	72	7.267
							0.33

OW-30B.TXT

0.38	-0.42094 -0.47710	16	26	36	74	7.282	0.32
0.36	-0.44097 -0.49714	16	26	38	76	7.298	0.30
0.34	-0.46383 -0.51999	16	26	40	78	7.291	0.31
0.35	-0.45406 -0.51022	16	26	42	80	7.307	0.29
0.33	-0.47763 -0.53379	16	26	44	82	7.309	0.29
0.33	-0.47986 -0.53603	16	26	46	84	7.341	0.26
0.29	-0.53079 -0.58696	16	26	48	86	7.331	0.27
0.31	-0.51418 -0.57035	16	26	50	88	7.352	0.25
0.28	-0.54919 -0.60536	16	26	52	90	7.359	0.24
0.27	-0.56138 -0.61755	16	26	54	92	7.354	0.25
0.28	-0.55372 -0.60989	16	26	56	94	7.352	0.25
0.28	-0.54994 -0.60611	16	26	58	96	7.369	0.23
0.26	-0.58075 -0.63692	16	27	0	98	7.372	0.23
0.26	-0.58603 -0.64220	16	27	2	100	7.376	0.22
0.26	-0.59304 -0.64921	16	27	4	102	7.382	0.22
0.25	-0.60613 -0.66230	16	27	6	104	7.389	0.21
0.24	-0.62006 -0.67623	16	27	8	106	7.415	0.18
0.21	-0.67770 -0.73386	16	27	10	108	7.429	0.17
0.20	-0.70966 -0.76583	16	27	12	110	7.413	0.19
0.21	-0.67217 -0.72834	16	27	14	112	7.416	0.18
0.21	-0.67820 -0.73437	16	27	16	114	7.425	0.18
0.20	-0.70052 -0.75668	16	27	18	116	7.422	0.18
0.20	-0.69260 -0.74877	16	27	20	118	7.429	0.17
0.19	-0.71021 -0.76638						

0.19	-0.72629 -0.78246	16	27	22	120	7.435	0.17
0.15	-0.83340 -0.88957	16	27	24	122	7.471	0.13
0.17	-0.77592 -0.83209	16	27	26	124	7.453	0.15

			OW-30B.TXT					
0.17	-0.76652	-0.82269	16	27	28	126	7.450	0.15
0.14	-0.85795	-0.91411	16	27	30	128	7.478	0.12
0.16	-0.79271	-0.84888	16	27	32	130	7.458	0.14
0.15	-0.81918	-0.87535	16	27	34	132	7.467	0.13
0.14	-0.84662	-0.90279	16	27	36	134	7.475	0.13
0.14	-0.85642	-0.91259	16	27	38	136	7.478	0.12
0.10	-1.01036	-1.06653	16	27	40	138	7.514	0.09
0.10	-1.00927	-1.06544	16	27	42	140	7.514	0.09
0.09	-1.04074	-1.09691	16	27	44	142	7.520	0.08
0.09	-1.02811	-1.08427	16	27	46	144	7.518	0.08
0.13	-0.89883	-0.95500	16	27	48	146	7.489	0.11
0.11	-0.95627	-1.01244	16	27	50	148	7.503	0.10
0.08	-1.11147	-1.16764	16	27	52	150	7.532	0.07
0.08	-1.11699	-1.17316	16	27	54	152	7.533	0.07
0.11	-0.97490	-1.03106	16	27	56	154	7.507	0.09
0.10	-0.98812	-1.04428	16	27	58	156	7.510	0.09
0.10	-0.99857	-1.05473	16	28	0	158	7.512	0.09
0.06	-1.18775	-1.24392	16	28	2	160	7.543	0.06
0.05	-1.26837	-1.32454	16	28	4	162	7.553	0.05
0.09	-1.06470	-1.12087	16	28	6	164	7.524	0.08
0.08	-1.11699	-1.17316	16	28	8	166	7.533	0.07
0.07	-1.15927	-1.21544	16	28	10	168	7.539	0.06
0.08	-1.10737	-1.16354	16	28	12	170	7.531	0.07
0.08	-1.09006	-1.14623	16	28	14	172	7.529	0.07
0.07	-1.16700	-1.22317	16	28	16	174	7.540	0.06
0.06	-1.18775	-1.24392	16	28	18	176	7.543	0.06

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

OW-30B.TXT

K= 2.16E-03 CM/SEC FALLING

HEAD*

OW-32.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-32

DATE= 11/05/90

CASING	DIAMETER=	4	INCHES
SAND	DIAMETER=	10	INCHES
OPEN	INTERVAL=	5	FEET
INITIAL WATER ABOVE TRANS.=		5.92	FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER TIME (FEET)	TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS				
FALLING HEAD TEST									
1.00	0.00	0.21		21	55	14	0	7.545	1.62
0.98	-0.01	0.20		21	55	16	2	7.504	1.58
0.96	-0.02	0.19		21	55	18	4	7.481	1.56
0.96	-0.02	0.19		21	55	20	6	7.473	1.55
0.95	-0.02	0.19		21	55	22	8	7.456	1.54
0.94	-0.03	0.18		21	55	24	10	7.441	1.52
0.93	-0.03	0.18		21	55	26	12	7.429	1.51
0.92	-0.03	0.18		21	55	28	14	7.421	1.50
0.92 *	-0.04	0.17		21	55	30	16	7.412	1.49
0.91	-0.04	0.17		21	55	32	18	7.401	1.48
0.90	-0.04	0.17		21	55	34	20	7.387	1.47
0.90	-0.04	0.17		21	55	36	22	7.388	1.47
0.90	-0.04	0.17		21	55	38	24	7.377	1.46
0.90	-0.05	0.16							
0.89	-0.05	0.16	21	55	40	26	7.363	1.44	

			21	55	42	28	7.352	1.43
0.88	-0.05	0.16	21	55	44	30	7.343	1.42
0.88	-0.06	0.15	21	55	46	32	7.336	1.42
0.87	-0.06	0.15	21	55	48	34	7.332	1.41
0.87	-0.06	0.15	21	55	50	36	7.319	1.40
0.86	-0.06	0.15	21	55	52	38	7.317	1.40
0.86	-0.07	0.15	21	55	54	40	7.300	1.38
0.85	-0.07	0.14	21	55	56	42	7.293	1.37
0.85	-0.07	0.14	21	55	58	44	7.292	1.37
0.84	-0.07	0.14	21	56	0	46	7.279	1.36
0.84	-0.08	0.13	21	56	2	48	7.258	1.34
0.82	-0.08	0.13	21	56	4	50	7.268	1.35
0.83	-0.08	0.13	21	56	6	52	7.263	1.34
0.83	-0.08	0.13	21	56	8	54	7.252	1.33
0.82	-0.09	0.12	21	56	10	56	7.245	1.32
0.82	-0.09	0.12	21	56	12	58	7.232	1.31
0.81	-0.09	0.12	21	56	14	60	7.226	1.31
0.80	-0.09	0.12	21	56	16	62	7.219	1.30
0.80	-0.10	0.11	21	56	18	64	7.208	1.29
0.79	-0.10	0.11	21	56	20	66	7.207	1.29
0.79	-0.10	0.11	21	56	22	68	7.196	1.28
0.79	-0.11	0.11	21	56	24	70	7.182	1.26
0.78	-0.11	0.10	21	56	26	72	7.186	1.27
0.78	-0.11	0.10	21	56	28	74	7.179	1.26
0.77	-0.11	0.10	21	56	30	76	7.164	1.24
0.77	-0.12	0.09	21	56	40	86	7.137	1.22
0.75	-0.13	0.09	21	56	45	91	7.111	1.19
0.73	-0.13	0.08	21	56	50	96	7.095	1.18
0.72	-0.14	0.07	21	56	55	101	7.080	1.16
0.71	-0.15	0.06	21	57	0	106	7.064	1.14
0.70 *	-0.15	0.06	21	57	5	111	7.047	1.13
0.69	-0.16	0.05	21	57	10	116	7.026	1.11

OW-32.TXT

0.68	-0.17	0.04	21	57	15	121	7.011	1.09
0.67	-0.17	0.04	21	57	20	126	6.995	1.07
0.66	-0.18	0.03	21	57	25	131	6.980	1.06
0.65	-0.19	0.03	21	57	30	136	6.965	1.04
0.64	-0.19	0.02	21	57	35	141	6.945	1.02
0.63	-0.20	0.01	21	57	40	146	6.929	1.01
0.62	-0.21	0.00	21	57	45	151	6.914	0.99
0.61	-0.21	-0.00	21	58	0	166	6.879	0.96
0.59	-0.23	-0.02	21	58	15	181	6.835	0.91
0.56	-0.25	-0.04	21	58	30	196	6.797	0.88
0.54	-0.27	-0.06	21	58	45	211	6.763	0.84
0.52	-0.28	-0.07	21	59	0	226	6.718	0.80
0.49	-0.31	-0.10	21	59	15	241	6.693	0.77
0.48	-0.32	-0.11	21	59	30	256	6.652	0.73
0.45	-0.35	-0.14	21	59	45	271	6.623	0.70
0.43	-0.36	-0.15	22	0	0	286	6.599	0.68
0.42	-0.38	-0.17	22	0	15	301	6.573	0.65
0.40	-0.40	-0.18	22	0	30	316	6.542	0.62
0.38	-0.42	-0.21	22	0	45	331	6.515	0.60
0.37	-0.44	-0.23	22	1	0	346	6.488	0.57
0.35	-0.46	-0.25	22	1	30	376	6.450	0.53
0.33	-0.49	-0.28	22	2	0	406	6.404	0.48
0.30	-0.53	-0.32	22	2	30	436	6.372	0.45
0.28	-0.56	-0.35						

0.26	-0.59	-0.38	22	3	0	466	6.335	0.41
0.24	-0.62	-0.41	22	3	30	496	6.310	0.39
0.22	-0.66	-0.45	22	4	0	526	6.277	0.36

OW-32.TXT							
			22	4	30	556	6.258
0.21	-0.68	-0.47	22	5	0	586	6.228
0.19	-0.72	-0.51	22	5	30	616	6.221
0.19	-0.73	-0.52	22	6	0	646	6.211
0.18	-0.75	-0.54	22	6	30	676	6.193
0.17	-0.77	-0.56	22	7	0	706	6.186
0.16	-0.79	-0.58	22	7	30	736	6.186
0.16	-0.79	-0.57	22	8	0	766	6.170
0.15	-0.81	-0.60	22	8	30	796	6.165
0.15	-0.82	-0.61	22	9	0	826	6.166
0.15	-0.82	-0.61	22	9	30	856	6.155
0.14	-0.84	-0.63	22	10	0	886	6.158
0.15	-0.84	-0.62	22	10	30	916	6.163
0.15	-0.83	-0.61	22	10	54	940	6.154
0.14	-0.84	-0.63	22	10	56	942	6.162
0.15	-0.83	-0.62	22	10	58	944	6.149
0.14	-0.85	-0.64	22	11	0	946	6.150
0.14	-0.85	-0.64	22	11	2	948	6.160
0.15	-0.83	-0.62	22	11	4	950	6.163
0.15	-0.83	-0.61	22	11	14	960	6.167
0.15	-0.82	-0.61	22	11	16	962	6.161
0.15	-0.83	-0.62	22	11	18	964	6.163
0.15	-0.82	-0.61	RISING HEAD TEST		26	0	4.422
1.00	0.00	0.18	22	11	28	2	4.436
0.99	-0.00	0.17	22	11	30	4	4.451
0.98	-0.01	0.17	22	11	32	6	4.474
0.97	-0.02	0.16	22	11	34	8	4.474
0.97	-0.02	0.16	22	11	36	10	4.501
0.95	-0.02	0.15	22	11	38	12	4.497
0.95	-0.02	0.15	22	11	40	14	4.516
0.94	-0.03	0.15	22	11	42	16	4.517
0.94	-0.03	0.15					1.40

			22	11	44	18	4.544	1.38
0.92	-0.04	0.14	22	11	46	20	4.559	1.36
0.91	-0.04	0.13	22	11	48	22	4.559	1.36
0.91	-0.04	0.13	22	11	50	24	4.567	1.35
0.90	-0.04	0.13	22	11	52	26	4.579	1.34
0.90 **	-0.05	0.13	22	11	54	28	4.586	1.33
0.89	-0.05	0.13	22	11	56	30	4.587	1.33
0.89	-0.05	0.12	22	11	58	32	4.604	1.32
0.88	-0.06	0.12	22	12	0	34	4.612	1.31
0.87	-0.06	0.12	22	12	2	36	4.625	1.30
0.86	-0.06	0.11	22	12	4	38	4.629	1.29
0.86	-0.06	0.11	22	12	6	40	4.643	1.28
0.85	-0.07	0.11	22	12	8	42	4.655	1.27
0.84	-0.07	0.10	22	12	10	44	4.664	1.26
0.84	-0.08	0.10	22	12	12	46	4.661	1.26
0.84	-0.08	0.10	22	12	14	48	4.681	1.24
0.83	-0.08	0.09	22	12	16	50	4.685	1.24
0.82	-0.08	0.09	22	12	18	52	4.695	1.23
0.82	-0.09	0.09	22	12	20	54	4.702	1.22
0.81	-0.09	0.09	22	12	22	56	4.711	1.21
0.81 **	-0.09	0.08	22	12	24	58	4.724	1.20
0.80	-0.10	0.08						

0.79	-0.10	0.08	22	12	26	60	4.729	1.19
0.79	-0.10	0.07	22	12	28	62	4.732	1.19
0.79	-0.10	0.07	22	12	30	64	4.742	1.18
0.78	-0.11	0.07	22	12	32	66	4.750	1.17
0.77	-0.11	0.06	22	12	34	68	4.766	1.15

OW-32.TXT

0.76	-0.12	0.06	22	12	38	72	4.772	1.15
0.77	-0.12	0.06	22	12	40	74	4.777	1.14
0.76	-0.12	0.06	22	12	42	76	4.795	1.13
0.75	-0.12	0.05	22	12	44	78	4.805	1.11
0.74	-0.13	0.05	22	12	46	80	4.811	1.11
0.74	-0.13	0.05	22	12	48	82	4.814	1.11
0.74	-0.13	0.04	22	12	50	84	4.825	1.09
0.73	-0.14	0.04	22	12	52	86	4.825	1.09
0.73	-0.14	0.04	22	12	54	88	4.844	1.08
0.72	-0.14	0.03	22	12	56	90	4.848	1.07
0.72	-0.15	0.03	22	12	58	92	4.853	1.07
0.71	-0.15	0.03	22	13	0	94	4.862	1.06
0.71	-0.15	0.02	22	13	2	96	4.870	1.05
0.70	-0.15	0.02	22	13	4	98	4.889	1.03
0.69	-0.16	0.01	22	13	6	100	4.882	1.04
0.69	-0.16	0.02	22	13	8	102	4.891	1.03
0.69	-0.16	0.01	22	13	10	104	4.903	1.02
0.68	-0.17	0.01	22	13	12	106	4.908	1.01
0.68	-0.17	0.01	22	13	14	108	4.916	1.00
0.67	-0.17	0.00	22	13	16	110	4.924	1.00
0.66	-0.18	-0.00	22	13	18	112	4.924	1.00
0.66	-0.18	-0.00	22	13	20	114	4.944	0.98
0.65	-0.19	-0.01	22	13	22	116	4.941	0.98
0.65	-0.18	-0.01	22	13	24	118	4.948	0.97
0.65	-0.19	-0.01	22	13	26	120	4.960	0.96
0.64	-0.19	-0.02	22	13	28	122	4.965	0.96
0.64	-0.20	-0.02	22	13	30	124	4.971	0.95
0.63	-0.20	-0.02	22	13	32	126	4.977	0.94
0.63	-0.20	-0.03	22	13	34	128	4.983	0.94
0.63	-0.20	-0.03	22	13	36	130	4.993	0.93
0.62	-0.21	-0.03	22	13	38	132	4.997	0.92
0.62	-0.21	-0.03						

			22	13	40	134	5.002	0.92
0.61	-0.21	-0.04	22	13	42	136	5.009	0.91
0.61	-0.22	-0.04	22	13	44	138	5.015	0.91
0.60	-0.22	-0.04	22	13	46	140	5.023	0.90
0.60	-0.22	-0.05	22	13	48	142	5.031	0.89
0.59	-0.23	-0.05	22	13	50	144	5.032	0.89
0.59	-0.23	-0.05	22	13	52	146	5.041	0.88
0.59	-0.23	-0.06	22	13	54	148	5.043	0.88
0.59	-0.23	-0.06	22	13	56	150	5.055	0.87
0.58	-0.24	-0.06	22	13	58	152	5.058	0.86
0.58	-0.24	-0.06	22	14	15	169	5.119	0.80
0.53	-0.27	-0.10	22	14	30	184	5.155	0.77
0.51	-0.29	-0.12	22	14	45	199	5.200	0.72
0.48	-0.32	-0.14	22	15	0	214	5.245	0.68
0.45	-0.35	-0.17	22	15	15	229	5.269	0.65
0.43	-0.36	-0.19	22	15	30	244	5.309	0.61
0.41	-0.39	-0.21	22	15	45	259	5.338	0.58
0.39	-0.41	-0.24	22	16	0	274	5.389	0.53
0.35	-0.45	-0.27	22	16	15	289	5.415	0.50
0.34	-0.47	-0.30						
0.29	-0.54	-0.37	22	17	0	334	5.491	0.43
0.24	-0.61	-0.44	22	17	30	364	5.555	0.37
0.21	-0.67	-0.50	22	18	0	394	5.602	0.32
0.19	-0.72	-0.54	22	18	30	424	5.632	0.29
0.16	-0.81	-0.63	22	19	0	454	5.687	0.23
0.14	-0.86	-0.68	22	19	30	484	5.713	0.21
0.12	-0.93	-0.75	22	20	0	514	5.743	0.18

OW-32.TXT

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 6.21E-04 CM/SEC FALLING

893-6255

OW-36.TXT
DECEMBER 1990

RISING HEAD TEST -

WELL NO. OW-36

DATE= 11/05/90
 CASING DIAMETER= 7.04 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 4.84 FEET
 INITIAL WATER ABOVE TRANS.= 9.98 FEET

HEAD RATIO	HEAD RATIO	LOG			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)	
		24-HR CLOCK TIME	HOURS	MINUTES	SECONDS			
1.00	0		23	7	42	0	9.516	-0.46
1.00	0		23	7	44	2	9.510	-0.47
1.01	0.004295		23	7	46	4	9.511	-0.47
0.99	-0.00390		23	7	48	6	9.520	-0.46
0.97	-0.01426		23	7	50	8	9.531	-0.45
1.01	0.003440		23	7	52	10	9.512	-0.47
0.99	-0.00259		23	7	54	12	9.518	-0.46
1.01	0.005576		23	7	56	14	9.510	-0.47
0.98	-0.00696		23	8	0	18	9.536	-0.44
0.96	-0.01942		23	8	2	20	11.152	1.17
-2.52	ERR		23	8	4	22	10.793	0.81
-1.75	ERR		23	8	6	24	10.669	0.69
-1.48	ERR		23	8	8	26	10.557	0.58
-1.24	ERR		23	8	10	28	10.472	0.49
-1.06	ERR		23	8	12	30	10.380	0.40
-0.86	ERR		23	8	14	32	10.311	0.33
-0.71	ERR		23	8	16	34	10.243	0.26
-0.57	ERR		23	8	18	36	10.187	0.21
-0.44	ERR		23	8	20	38	10.127	0.15

OW-36.TXT

-0.32 ERR

-0.26	ERR	23	8	22	40	10.100	0.12
-0.16	ERR	23	8	24	42	10.052	0.07
-0.06	ERR	23	8	26	44	10.009	0.03
0.00	-2.30791	23	8	28	46	9.978	-0.00
0.06	-1.23578	23	8	30	48	9.953	-0.03
0.15	-0.82518	23	8	32	50	9.911	-0.07
0.14	-0.84587	23	8	34	52	9.914	-0.07
0.26 **	-0.58352	23	8	36	54	9.859	-0.12
0.30	-0.52192	23	8	38	56	9.840	-0.14
0.33	-0.47630	23	8	40	58	9.825	-0.16
0.39	-0.41436	23	8	42	60	9.801	-0.18
0.42	-0.37680	23	8	44	62	9.785	-0.20
0.46	-0.34175	23	8	46	64	9.769	-0.21
0.49	-0.31286	23	8	48	66	9.754	-0.23
0.52	-0.28370	23	8	50	68	9.738	-0.24
0.49 **	-0.31242	23	8	52	70	9.754	-0.23
0.55	-0.25910	23	8	54	72	9.724	-0.26
0.57	-0.24673	23	8	56	74	9.717	-0.26
0.60	-0.22157	23	9	58	76	9.701	-0.28
0.61	-0.21303	23	9	0	78	9.696	-0.28
0.63	-0.20017	23	9	2	80	9.687	-0.29
0.64	-0.19406	23	9	4	82	9.683	-0.30
0.66	-0.18372	23	9	6	84	9.676	-0.30
0.65	-0.18936	23	9	8	86	9.680	-0.30
0.68	-0.16755	23	9	10	88	9.664	-0.32
0.67	-0.17137	23	9	12	90	9.667	-0.31

OW-36.TXT						
		23	9	14	92	9.665
0.68	-0.16786	23	9	16	94	9.653
0.70	-0.15257	23	9	18	96	9.645
0.72	-0.14137	23	9	20	98	9.657-
0.69	-0.15813	23	9	22	100	9.666
0.68	-0.16946	23	9	24	102	9.641
0.73	-0.13661	23	9	26	104	9.635
0.74	-0.12841	23	9	28	106	9.640
0.73	-0.13572	23	9	30	108	9.633
0.75	-0.12667	23	9	32	110	9.639
0.73	-0.13425	23	9	34	112	9.625
0.76	-0.11667	23	9	36	114	9.631
0.75	-0.12408	23	9	38	116	9.631
0.75	-0.12350	23	9	40	118	9.623
0.77	-0.11470	23	9	42	120	9.622
0.77	-0.11274	23	9	44	122	9.629
0.76	-0.12179	23	9	46	124	9.613
0.79	-0.10250	23	9	48	126	9.623
0.77	-0.11442	23	9	50	128	9.610
0.80	-0.09815	23	9	52	130	9.620
0.77	-0.11078	23	9	54	132	9.606
0.81	-0.09358	23	9	56	134	9.604
0.81	-0.09117	23	9	58	136	9.606
0.81	-0.09411	23	10	0	138	9.617
0.78	-0.10662	23	10	2	140	9.601
0.82	-0.08825	23	10	4	142	9.598
0.82	-0.08483	23	10	6	144	9.601
0.82	-0.08852	23	10	8	146	9.607
0.80	-0.09492	23	10	10	148	9.595
0.83	-0.08117	23	10	12	150	9.596
0.83	-0.08300					-0.38

OW-36.TXT

0.83	-0.07961	23	10	14	152	9.593	-0.39
0.83	-0.07858	23	10	16	154	9.593	-0.39
0.80	-0.09869	23	10	18	156	9.610	-0.37
0.83	-0.08117	23	10	20	158	9.595	-0.39
0.80	-0.09680	23	10	22	160	9.608	-0.37
0.81	-0.09091	23	10	24	162	9.603	-0.38
0.85	-0.07216	23	10	36	174	9.587	-0.39
0.85	-0.07165	23	10	38	176	9.586	-0.39
1.16	0.064103	23	10	40	178	9.442	-0.54
4.05 *	0.607652	23	10	42	180	8.099	-1.88
3.78	0.577601	23	10	44	182	8.224	-1.76
3.46	0.539557	23	10	46	184	8.372	-1.61
3.19	0.504192	23	10	48	186	8.497	-1.48
2.96	0.471267	23	10	50	188	8.606	-1.37
2.75	0.439503	23	10	52	190	8.703	-1.28
2.54	0.405485	23	10	54	192	8.799	-1.18
2.36	0.373077	23	10	56	194	8.884	-1.10
2.25	0.351522	23	11	0	198	9.001	-0.98
2.11	0.323953	23	11	2	200	9.047	-0.93
2.01	0.302871	23	11	4	202	9.093	-0.89
1.91	0.281052	23	11	6	204	9.135	-0.85
1.82	0.260218	23	11	8	206	9.166	-0.81
1.75 *	0.243786	23	11	10	208	9.192	-0.79
1.70	0.229898	23	11	12	210	9.222	-0.76
1.63	0.212651	23	11	14	212	9.249	-0.73
1.57	0.197027	23	11	16	214	9.263	-0.72
1.54	0.188441	23	11	18	216	9.281	-0.70
1.50	0.177391						

		OW-36.TXT					
1.46	0.165758	23	11	20	218	9.300	-0.68
1.42	0.153502	23	11	22	220	9.319	-0.66
1.40	0.147242	23	11	24	222	9.328	-0.65
1.36	0.133652	23	11	26	224	9.348	-0.63
1.31	0.118474	23	11	28	226	9.370	-0.61
1.31	0.118474	23	11	30	228	9.370	-0.61
1.26	0.101552	23	11	32	230	9.393	-0.59
1.29	0.109173	23	11	34	232	9.383	-0.60
1.26	0.100525	23	11	36	234	9.395	-0.59
1.23	0.089951	23	11	38	236	9.409	-0.57
1.22	0.087487	23	11	40	238	9.412	-0.57
1.22	0.085187	23	11	42	240	9.415	-0.56
1.20	0.079652	23	11	44	242	9.422	-0.56
1.17	0.068181	23	11	46	244	9.437	-0.54
1.17	0.069103	23	11	48	246	9.436	-0.54
1.14	0.057157	23	11	50	248	9.450	-0.53
1.11	0.045651	23	11	52	250	9.464	-0.52
1.16	0.063730	23	11	54	252	9.442	-0.54
1.15	0.060925	23	11	56	254	9.446	-0.53
1.15	0.060738	23	11	58	256	9.446	-0.53
1.14	0.057535	23	12	0	258	9.450	-0.53
1.13	0.052208	23	12	2	260	9.456	-0.52
1.12	0.049520	23	12	4	262	9.460	-0.52
1.07	0.030223	23	12	6	264	9.482	-0.50
1.11	0.046428	23	12	8	266	9.463	-0.52
1.10	0.040176	23	12	10	268	9.471	-0.51
1.08	0.032833	23	12	12	270	9.479	-0.50
1.05	0.022299	23	12	14	272	9.491	-0.49

OW-36.TXT

1.09	0.036023	23	12	16	274	9.475	-0.50
1.08	0.035029	23	12	18	276	9.477	-0.50
1.07	0.028205	23	12	20	278	9.484	-0.50
1.07	0.030223	23	12	22	280	9.482	-0.50
1.07	0.030424	23	12	24	282	9.482	-0.50
1.03	0.014853	23	12	26	284	9.499	-0.48
1.06	0.026787	23	12	28	286	9.486	-0.49
1.06	0.027192	23	12	30	288	9.486	-0.49
1.06	0.025160	23	12	32	290	9.488	-0.49
1.04	0.016934	23	12	34	292	9.497	-0.48
1.03	0.014853	23	12	36	294	9.499	-0.48
1.03	0.012552	23	12	38	296	9.502	-0.48
1.04	0.017349	23	12	40	298	9.497	-0.48
1.05	0.020037	23	12	42	300	9.494	-0.49
1.01	0.004509	23	12	44	302	9.511	-0.47
1.02	0.010239	23	12	46	304	9.505	-0.48
1.01	0.004295	23	12	48	306	9.511	-0.47
1.04	0.016103	23	12	50	308	9.498	-0.48
1.00	-0.00194	23	12	52	310	9.518	-0.46
1.02	0.009817	23	12	54	312	9.505	-0.47
1.00	0.001938	23	12	56	314	9.514	-0.47
1.03	0.011082	23	12	58	316	9.504	-0.48
1.01	0.005576	23	13	0	318	9.510	-0.47
1.02	0.008761	23	13	2	320	9.506	-0.47
1.01	0.004723	23	13	4	322	9.511	-0.47
0.97	-0.01137	23	13	6	324	9.528	-0.45
1.02	0.010661	23	13	8	326	9.504	-0.48
1.01	0.003440	23	13	10	328	9.512	-0.47
0.98	-0.00806	23	13	12	330	9.524	-0.46
1.01	0.005150	23	13	14	332	9.510	-0.47

		OW-36.TXT					
0.98	-0.00960	23	13	16	334	9.526	-0.45
1.01	0.004723	23	13	18	336	9.511	-0.47
1.01	0.004509	23	13	20	338	9.511	-0.47
1.00	-0.00151	23	13	22	340	9.517	-0.46
1.00	0.001508	23	13	24	342	9.514	-0.47
0.99	-0.00652	23	13	26	344	9.523	-0.46
1.00	-0.00173	23	13	28	346	9.517	-0.46
1.01	0.003440	23	13	30	348	9.512	-0.47
0.99	-0.00390	23	13	32	350	9.520	-0.46
1.00	-0.00216	23	13	34	352	9.518	-0.46
1.01	0.004936	23	13	36	354	9.510	-0.47
1.00	0.000647	23	13	38	356	9.515	-0.47
0.97	-0.01292	23	13	40	358	9.529	-0.45
0.99	-0.00412	23	13	42	360	9.520	-0.46
0.98	-0.00674	23	13	44	362	9.523	-0.46
1.00	-0.00064	23	13	46	364	9.516	-0.46
0.97	-0.01314	23	13	48	366	9.530	-0.45
1.00	-0.00216	23	13	50	368	9.518	-0.46
0.96	-0.01987	23	13	52	370	9.536	-0.44
0.99	-0.00652	23	13	54	372	9.523	-0.46
0.98	-0.00872	23	13	56	374	9.525	-0.46
1.00	-0.00021	23	14	0	378	9.526	-0.45
0.98	-0.00938	23	14	2	380	9.516	-0.46
1.00	0	23	14	4	382	9.517	-0.46
1.00	-0.00151	23	14	6	384	9.514	-0.47
1.00	0.001508						

OW-36.TXT

0.95	-0.02373		23	14	10	388	9.518	-0.46
1.00	-0.00194		23	14	12	390	9.512	-0.47
1.01	0.003225		23	14	14	392	9.516	-0.46
1.00	0		23	14	16	394	9.524	-0.46
0.98	-0.00740		23	14	18	396	9.519	-0.46
0.99	-0.00346		23	14	20	398	9.536	-0.44
0.96	-0.01942		23	14	22	400	9.525	-0.45
0.98	-0.00916		23	14	24	402	9.528	-0.45
0.97	-0.01203		23	14	26	404	9.531	-0.45
0.97	-0.01470		23	14	28	406	9.540	-0.44
0.95	-0.02305		23	14	30	408	9.527	-0.45
0.97	-0.01115		23	14	32	410	9.522	-0.46
0.99	-0.00586		23	14	36	414	9.521	-0.46
0.99	-0.00521		23	14	38	416	9.523	-0.46
0.98	-0.00674							

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD**

K= 2.59E-02 CM/SEC RISING

OW-31.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-31

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 7.8 FEET
 INITIAL WATER ABOVE TRANS.= 10.65 FEET

HEAD	HEAD	LOG	24-HR CLOCK TIME		ELAPSED TIME	WATER ABOVE TRANS.	HEAD
			LOG				

RATIO	RATIO	HEAD	HOURS	MINUTES	SECONDS	(SEC)	(FEET)	(FEET)
			FALLING HEAD TEST					
1.00	0.00	0.13	20	47	38	0	12.006	1.36
0.91	-0.04	0.09	20	47	40	2	11.889	1.24
0.81	-0.09	0.04	20	47	42	4	11.746	1.10
0.72	-0.14	-0.01	20	47	44	6	11.625	0.98
0.64	-0.19	-0.06	20	47	46	8	11.522	0.87
0.59	-0.23	-0.10	20	47	48	10	11.444	0.79
0.52	-0.28	-0.15	20	47	50	12	11.354	0.70
0.46	-0.33	-0.20	20	47	52	14	11.279	0.63
0.42	-0.38	-0.24	20	47	54	16	11.219	0.57
0.39	-0.41	-0.28	20	47	56	18	11.177	0.53
0.34	-0.46	-0.33	20	48	0	22	11.071	0.42
0.31	-0.51	-0.38	20	48	2	24	11.032	0.38
0.28	-0.55	-0.42	20	48	4	26	11.002	0.35
0.26	-0.59	-0.45						

			20	48	6	28	10.983	0.33
0.25	-0.61	-0.48	20	48	8	30	10.947	0.30
0.22	-0.66	-0.53	20	48	10	32	10.921	0.27
0.20	-0.70	-0.57	20	48	12	34	10.893	0.24
0.18	-0.75	-0.61	20	48	14	36	10.885	0.23
0.17	-0.76	-0.63	20	48	16	38	10.866	0.22
0.16	-0.80	-0.67	20	48	18	40	10.845	0.19
0.14	-0.84	-0.71	20	48	20	42	10.833	0.18
0.13	-0.87	-0.74	20	48	22	44	10.817	0.17
0.12	-0.91	-0.78	20	48	24	46	10.792	0.14
0.11	-0.98	-0.85	20	48	26	48	10.793	0.14
0.11	-0.98	-0.84	20	48	28	50	10.771	0.12
0.09	-1.05	-0.92	20	48	30	52	10.777	0.13
0.09	-1.03	-0.89	20	48	32	54	10.757	0.11
0.08 *	-1.10	-0.97	20	48	34	56	10.757	0.11
0.08	-1.10	-0.97	20	48	36	58	10.748	0.10
0.07	-1.14	-1.01	20	48	38	60	10.740	0.09
0.07	-1.18	-1.05	20	48	40	62	10.734	0.08
0.06	-1.21	-1.08	20	48	42	64	10.731	0.08
0.06	-1.22	-1.09	20	48	44	66	10.724	0.07
0.05	-1.26	-1.13	20	48	46	68	10.702	0.05
0.04	-1.42	-1.28	20	48	48	70	10.695	0.05
0.03	-1.48	-1.34	20	48	50	72	10.703	0.05
0.04	-1.41	-1.27	20	48	52	74	10.705	0.05
0.04	-1.39	-1.26	20	48	54	76	10.693	0.04
0.03 *	-1.49	-1.36	20	48	56	78	10.688	0.04
0.03	-1.55	-1.42	20	48	58	80	10.699	0.05
0.04	-1.44	-1.31	20	49	0	82	10.692	0.04
0.03	-1.51	-1.38	20	49	2	84	10.674	0.02
0.02	-1.75	-1.61	20	49	4	86	10.677	0.03
0.02	-1.71	-1.58	20	49	6	88	10.670	0.02
0.01	-1.83	-1.70	20	49	8	90	10.673	0.02

OW-31.TXT

0.02	-1.76	-1.63	20	49	10	92	10.670	0.02
0.01	-1.83	-1.70	20	49	20	102	10.673	0.02
0.02	-1.77	-1.64	20	49	25	107	10.671	0.02
0.02	-1.82	-1.69	20	49	30	112	10.674	0.02
0.02	-1.75	-1.62	20	49	35	117	10.675	0.02
0.02	-1.74	-1.60	20	49	40	122	10.655	0.01
0.00	-2.40	-2.27	20	49	45	127	10.671	0.02
0.02	-1.82	-1.69						

0.00	-2.49	-2.35	20	49	50	132	10.654	0.00
0.01	-2.22	-2.09	20	49	55	137	10.658	0.01
0.00	-3.27	-3.14	20	50	0	142	10.651	0.00
0.00	-3.71	-3.58	20	50	5	147	10.650	0.00
0.00	-3.44	-3.30	20	50	10	152	10.650	0.00
0.00	-2.42	-2.29	20	50	15	157	10.655	0.01
0.00	-2.86	-2.73	20	50	20	162	10.652	0.00
0.00	-2.53	-2.40	20	50	25	167	10.654	0.00
0.00	-2.32	-2.19	20	50	30	172	10.656	0.01
0.01	-1.87	-1.73	20	50	36	178	10.668	0.02
0.01	-2.24	-2.10	20	50	38	180	10.658	0.01
0.02	-1.77	-1.64	20	50	40	182	10.673	0.02
0.02	-1.82	-1.69	20	50	42	184	10.670	0.02
0.02	-1.80	-1.67	20	50	56	198	10.671	0.02
			RISING HEAD TEST					
1.00 **	0.00	0.17	20	51	2	0	9.187	1.46
0.87	-0.06	0.11	20	51	4	2	9.371	1.28
0.78	-0.11	0.06	20	51	6	4	9.512	1.14
0.70	-0.16	0.01	20	51	8	6	9.628	1.02
					10	8	9.743	0.91

OW-31.TXT

0.62	-0.21	-0.04						
0.57	-0.25	-0.08	20	51	12	10	9.819	0.83
0.50	-0.30	-0.14	20	51	14	12	9.921	0.73
0.47	-0.33	-0.16	20	51	16	14	9.965	0.68
0.42	-0.38	-0.21	20	51	18	16	10.036	0.61
0.39	-0.41	-0.25	20	51	20	18	10.082	0.57
0.35	-0.46	-0.29	20	51	22	20	10.139	0.51
0.32	-0.49	-0.32	20	51	24	22	10.175	0.47
0.28	-0.55	-0.39	20	51	26	24	10.238	0.41
0.26	-0.59	-0.43	20	51	28	26	10.277	0.37
0.22	-0.65	-0.49	20	51	32	30	10.325	0.32
0.20	-0.69	-0.53	20	51	34	32	10.353	0.30
0.18	-0.73	-0.57	20	51	36	34	10.380	0.27
0.17	-0.76	-0.60	20	51	38	36	10.397	0.25
0.16 **	-0.79	-0.62	20	51	40	38	10.412	0.24
0.15	-0.84	-0.67	20	51	42	40	10.437	0.21
0.13	-0.89	-0.72	20	51	44	42	10.461	0.19
0.12	-0.92	-0.76	20	51	46	44	10.475	0.17
0.11	-0.95	-0.79	20	51	48	46	10.487	0.16
0.11	-0.95	-0.79	20	51	50	48	10.486	0.16
0.10	-0.99	-0.82	20	51	52	50	10.499	0.15
0.09	-1.06	-0.89	20	51	54	52	10.521	0.13
0.09	-1.05	-0.88	20	51	56	54	10.518	0.13
0.07	-1.14	-0.98	20	52	0	58	10.553	0.10
0.07	-1.18	-1.01	20	52	2	60	10.542	0.11
0.07	-1.13	-0.97	20	52	4	62	10.550	0.10
0.07	-1.17	-1.00	20	52	6	64	10.572	0.08
0.05	-1.28	-1.11	20	52	8	66	10.581	0.07
0.05	-1.32	-1.16	20	52	10	68	10.570	0.08
0.05	-1.26	-1.10	20	52	12	70	10.596	0.05
0.04	-1.43	-1.27	20	52	14	72	10.581	0.07
0.05	-1.32	-1.16						

			20	52	16	74	10.602	0.05
0.03	-1.49	-1.32	20	52	18	76	10.604	0.05
0.03	-1.51	-1.34	20	52	20	78	10.612	0.04
0.03	-1.59	-1.42	20	52	22	80	10.598	0.05
0.04	-1.45	-1.28	20	52	24	82	10.623	0.03
0.02	-1.74	-1.57						

0.02	-1.73	-1.57	20	52	26	84	10.623	0.03
0.01	-1.86	-1.69	20	52	28	86	10.630	0.02
0.03	-1.56	-1.40	20	52	30	88	10.610	0.04
0.01	-1.83	-1.66	20	52	32	90	10.628	0.02
0.01	-1.97	-1.81	20	52	34	92	10.634	0.02
0.01	-1.99	-1.82	20	52	36	94	10.635	0.01
0.02	-1.71	-1.54	20	52	38	96	10.621	0.03
0.02	-1.78	-1.62	20	52	40	98	10.626	0.02
0.02	-1.81	-1.64	20	52	42	100	10.627	0.02
0.01	-1.89	-1.73	20	52	44	102	10.631	0.02
0.01	-1.88	-1.72	20	52	46	104	10.631	0.02
0.01	-1.98	-1.82	20	52	48	106	10.635	0.02
0.01	-2.10	-1.94	20	52	50	108	10.638	0.01

THESE POINTS
HEAD*

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 6.49E-03 CM/SEC FALLING

OW-37.TXT

DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-37

DATE= 11/05/90
 CASING DIAMETER= 4 INCHES
 SAND DIAMETER= 10 INCHES
 OPEN INTERVAL= 13.8 FEET
 INITIAL WATER ABOVE TRANS.= 11.4 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00	0.00	0.17	23	49		14	0	12.885
0.97	-0.01	0.16	23	49		16	2	12.839
0.95	-0.02	0.15	23	49		18	4	12.811
0.90	-0.05	0.12	23	49		20	6	12.731
0.83	-0.08	0.09	23	49		22	8	12.634
0.86	-0.07	0.10	23	49		24	10	12.671
0.84	-0.07	0.10	23	49		26	12	12.650
0.82	-0.08	0.09	23	49		28	14	12.622
0.81 *	-0.09	0.08	23	49		30	16	12.607
0.81	-0.09	0.08	23	49		32	18	12.600
0.79	-0.10	0.07	23	49		34	20	12.568
0.77	-0.11	0.06	23	49		36	22	12.547
0.76	-0.12	0.05	23	49		38	24	12.531
0.75	-0.13	0.05	23	49		40	26	12.510
0.74	-0.13	0.04	23	49		42	28	12.502
0.73	-0.14	0.04	23	49		44	30	12.486
						46	32	12.467
								1.07

OW-37.TXT

0.72	-0.14	0.03	23	49	48	34	12.450	1.05
0.71	-0.15	0.02	23	49	50	36	12.435	1.04
0.70 *	-0.16	0.02	23	49	52	38	12.424	1.02
0.69	-0.16	0.01	23	49	54	40	12.408	1.01
0.68	-0.17	0.00	23	49	56	42	12.390	0.99
0.67	-0.18	-0.00	23	49	58	44	12.389	0.99
0.67	-0.18	-0.00	23	50	0	46	12.371	0.97
0.65	-0.18	-0.01	23	50	2	48	12.359	0.96
0.65	-0.19	-0.02	23	50	4	50	12.345	0.95
0.64	-0.20	-0.02	23	50	6	52	12.339	0.94
0.63	-0.20	-0.03	23	50	8	54	12.321	0.92
0.62	-0.21	-0.04	23	50	10	56	12.305	0.91
0.61	-0.21	-0.04	23	50	12	58	12.293	0.89
0.60	-0.22	-0.05	23	50	14	60	12.288	0.89
0.60	-0.22	-0.05	23	50	16	62	12.268	0.87
0.58	-0.23	-0.06	23	50	18	64	12.262	0.86
0.58	-0.24	-0.06	23	50	20	66	12.248	0.85
0.57	-0.24	-0.07	23	50	22	68	12.235	0.84
0.56	-0.25	-0.08						

0.56	-0.25	-0.08	23	50	24	70	12.234	0.83
0.55	-0.26	-0.09	23	50	26	72	12.220	0.82
0.54	-0.27	-0.09	23	50	28	74	12.205	0.80
0.54	-0.27	-0.10	23	50	30	76	12.195	0.79
0.50	-0.30	-0.13	23	50	40	86	12.149	0.75
0.49	-0.31	-0.14	23	50	45	91	12.128	0.73
0.48	-0.32	-0.15	23	50	50	96	12.108	0.71
0.46	-0.33	-0.16	23	50	55	101	12.089	0.69

				OW-37.TXT				
0.44	-0.36	-0.18	23	51	0	106	12.056	0.66
0.43	-0.37	-0.20	23	51	5	111	12.033	0.63
0.42	-0.37	-0.20	23	51	10	116	12.027	0.63
0.41	-0.39	-0.22	23	51	15	121	12.006	0.61
0.40	-0.40	-0.23	23	51	20	126	11.991	0.59
0.39	-0.40	-0.23	23	51	25	131	11.985	0.59
0.37	-0.43	-0.26	23	51	30	136	11.947	0.55
0.36	-0.45	-0.27	23	51	35	141	11.931	0.53
0.35	-0.46	-0.28	23	51	40	146	11.920	0.52
0.34	-0.46	-0.29	23	51	45	151	11.911	0.51
0.34	-0.47	-0.30	23	51	50	156	11.902	0.50
0.32	-0.49	-0.32	23	51	55	161	11.881	0.48
0.32	-0.50	-0.33	23	52	0	166	11.868	0.47
0.31	-0.50	-0.33	23	52	5	171	11.866	0.47
0.31	-0.50	-0.33	23	52	10	176	11.853	0.45
0.31	-0.52	-0.34	23	52	15	181	11.835	0.44
0.29	-0.53	-0.36	23	52	20	186	11.819	0.42
0.28	-0.55	-0.38	23	52	25	191	11.821	0.42
0.28	-0.55	-0.38	23	52	30	196	11.803	0.40
0.27	-0.57	-0.39	23	52	35	201	11.799	0.40
0.27	-0.57	-0.40	23	52	40	206	11.783	0.38
0.26	-0.59	-0.42	23	52	45	211	11.765	0.37
0.25	-0.61	-0.44	23	52	50	216	11.756	0.36
0.24	-0.62	-0.45	23	52	55	221	11.755	0.36
0.24	-0.62	-0.45	23	53	0	226	11.749	0.35
0.23	-0.63	-0.46	23	53	5	231	11.731	0.33
0.22	-0.65	-0.48	23	53	10	236	11.731	0.33
0.22	-0.65	-0.48	23	53	15	241	11.721	0.32
0.22	-0.67	-0.49	23	53	20	246	11.716	0.32
0.21	-0.67	-0.50	23	53	25	251	11.701	0.30
0.20	-0.69	-0.52	23	53	30	256	11.695	0.29
0.20	-0.70	-0.53	23	53	35	261	11.696	0.30

OW-37.TXT								
0.20	-0.70	-0.53	23	53	40	266	11.692	0.29
0.20	-0.71	-0.53	23	53	45	271	11.680	0.28
0.19	-0.72	-0.55	23	53	50	276	11.666	0.27
0.18	-0.75	-0.58	23	53	55	281	11.665	0.27
0.18	-0.75	-0.58	23	54	0	286	11.665	0.26
0.18	-0.75	-0.58	23	54	5	291	11.656	0.26
0.17	-0.76	-0.59	23	54	10	296	11.656	0.26
0.17	-0.76	-0.59	23	54	15	301	11.650	0.25
0.17	-0.77	-0.60	23	54	20	306	11.631	0.23
0.16	-0.81	-0.64	23	54	25	311	11.637	0.24
0.16	-0.80	-0.63	23	54	30	316	11.635	0.24
0.16	-0.80	-0.63	23	54	35	321	11.620	0.22
0.15	-0.83	-0.66	23	54	40	326	11.611	0.21
0.14	-0.85	-0.68	23	54	45	331	11.612	0.21
0.14	-0.84	-0.67	23	55	15	361	11.594	0.19
0.13	-0.88	-0.71	23	55	20	366	11.581	0.18
0.12	-0.91	-0.74						

0.13	-0.89	-0.72	23	55	25	371	11.591	0.19
0.13	-0.90	-0.73	23	55	30	376	11.586	0.19
0.13	-0.90	-0.72	23	55	35	381	11.589	0.19
0.13	-0.90	-0.73	23	55	44	390	11.588	0.19
RISING HEAD TEST								
1.00	0.00	0.18	23	55	50	0	9.887	1.51
0.95	-0.02	0.16	23	55	52	2	9.956	1.44
0.93	-0.03	0.15	23	55	54	4	9.997	1.40
0.90	-0.05	0.13	23	55	56	6	10.044	1.36
0.88 **	-0.05	0.13	23	56	58	8	10.066	1.33
					0	10	10.098	1.30

OW-37.TXT

0.86	-0.07	0.11	23	56	2	12	10.134	1.27
0.84	-0.08	0.10	23	56	4	14	10.140	1.26
0.83	-0.08	0.10	23	56	6	16	10.171	1.23
0.81	-0.09	0.09	23	56	8	18	10.200	1.20
0.79	-0.10	0.08	23	56	10	20	10.213	1.19
0.78	-0.11	0.07	23	56	12	22	10.252	1.15
0.76	-0.12	0.06	23	56	14	24	10.254	1.15
0.76	-0.12	0.06	23	56	16	26	10.294	1.11
0.73	-0.14	0.04	23	56	18	28	10.301	1.10
0.73	-0.14	0.04	23	56	20	30	10.324	1.08
0.71	-0.15	0.03	23	56	22	32	10.349	1.05
0.69	-0.16	0.02	23	56	24	34	10.373	1.03
0.68	-0.17	0.01	23	56	26	36	10.389	1.01
0.67	-0.18	0.00	23	56	28	38	10.397	1.00
0.66	-0.18	0.00	23	56	30	40	10.426	0.97
0.64	-0.19	-0.01	23	56	32	42	10.446	0.95
0.63	-0.20	-0.02	23	56	34	44	10.446	0.95
0.63	-0.20	-0.02	23	56	36	46	10.460	0.94
0.62	-0.21	-0.03	23	56	38	48	10.488	0.91
0.60 **	-0.22	-0.04	23	56	40	50	10.503	0.90
0.59	-0.23	-0.05	23	56	42	52	10.517	0.88
0.58	-0.23	-0.05	23	56	44	54	10.529	0.87
0.58	-0.24	-0.06	23	56	46	56	10.554	0.85
0.56	-0.25	-0.07	23	56	48	58	10.566	0.83
0.55	-0.26	-0.08	23	56	50	60	10.584	0.82
0.54	-0.27	-0.09	23	56	52	62	10.587	0.81
0.54	-0.27	-0.09	23	56	54	64	10.613	0.79
0.52	-0.28	-0.10	23	56	56	66	10.627	0.77
0.51	-0.29	-0.11	23	56	58	68	10.638	0.76
0.50	-0.30	-0.12	23	57	0	70	10.658	0.74
0.49	-0.31	-0.13	23	57	2	72	10.649	0.75
0.50	-0.30	-0.12						

				OW-37.TXT					
				23	57	4	74	10.683	0.72
0.47	-0.32	-0.14		23	57	6	76	10.704	0.70
0.46	-0.34	-0.16		23	57	8	78	10.698	0.70
0.46	-0.33	-0.15		23	57	10	80	10.724	0.68
0.45	-0.35	-0.17		23	57	12	82	10.720	0.68
0.45	-0.35	-0.17		23	57	14	84	10.743	0.66
0.43	-0.36	-0.18		23	57	16	86	10.750	0.65
0.43	-0.37	-0.19		23	57	18	88	10.759	0.64
0.42	-0.37	-0.19		23	57	20	90	10.771	0.63
0.42	-0.38	-0.20		23	57	22	92	10.793	0.61
0.40	-0.40	-0.22		23	57	24	94	10.805	0.60
0.39	-0.41	-0.23		23	57	26	96	10.808	0.59
0.39	-0.41	-0.23		23	57	30	100	10.840	0.56
0.37	-0.43	-0.25		23	57	32	102	10.842	0.56
0.37	-0.43	-0.25							

				23	57	34	104	10.859	0.54
				23	57	36	106	10.858	0.54
0.36	-0.45	-0.27		23	57	38	108	10.878	0.52
0.36	-0.45	-0.27		23	57	40	110	10.883	0.52
0.35	-0.46	-0.28		23	57	42	112	10.887	0.51
0.34	-0.47	-0.29		23	57	44	114	10.901	0.50
0.34	-0.47	-0.29		23	57	46	116	10.922	0.48
0.33	-0.48	-0.30		23	57	48	118	10.926	0.47
0.32	-0.50	-0.32		23	57	50	120	10.935	0.47
0.31	-0.50	-0.32		23	57	52	122	10.936	0.46
0.31	-0.51	-0.33		23	57	54	124	10.955	0.45
0.29	-0.53	-0.35		23	57	56	126	10.947	0.45
0.30	-0.52	-0.34		23	57	58	128	10.959	0.44

OW-37.TXT

0.29	-0.54	-0.36	23	58	0	130	10.966	0.43
0.29	-0.54	-0.36	23	58	2	132	10.980	0.42
0.28	-0.56	-0.38	23	58	4	134	10.983	0.42
0.28	-0.56	-0.38	23	58	6	136	10.996	0.40
0.27	-0.57	-0.39	23	58	8	138	10.999	0.40
0.26	-0.58	-0.40	23	58	10	140	11.011	0.39
0.26	-0.59	-0.41	23	58	12	142	11.022	0.38
0.25	-0.60	-0.42	23	58	14	144	11.024	0.38
0.25	-0.61	-0.43	23	58	16	146	11.039	0.36
0.24	-0.62	-0.44	23	58	18	148	11.035	0.37
0.24	-0.62	-0.44	23	58	20	150	11.050	0.35
0.23	-0.64	-0.46	23	58	22	152	11.053	0.35
0.23	-0.64	-0.46	23	58	24	154	11.061	0.34
0.22	-0.65	-0.47	23	58	26	156	11.066	0.33
0.22	-0.66	-0.48	23	58	28	158	11.080	0.32
0.21	-0.68	-0.50	23	58	30	160	11.083	0.32
0.21	-0.68	-0.50	23	58	32	162	11.087	0.31
0.21	-0.68	-0.50	23	58	34	164	11.091	0.31
0.20	-0.69	-0.51	23	58	36	166	11.098	0.30
0.20	-0.70	-0.52	23	58	38	168	11.106	0.29
0.19	-0.71	-0.53	23	58	45	175	11.122	0.28
0.18	-0.74	-0.56	23	58	50	180	11.136	0.26
0.17	-0.76	-0.58	23	58	55	185	11.155	0.25
0.16	-0.79	-0.61	23	59	0	190	11.165	0.24
0.16	-0.81	-0.63	23	59	5	195	11.178	0.22
0.15	-0.83	-0.65	23	59	10	200	11.181	0.22
0.14	-0.84	-0.66	23	59	15	205	11.193	0.21
0.14	-0.86	-0.68	23	59	20	210	11.207	0.19
0.13	-0.89	-0.71	23	59	25	215	11.221	0.18
0.12	-0.93	-0.75	23	59	30	220	11.230	0.17
0.11	-0.95	-0.77	23	59	35	225	11.235	0.16
0.11	-0.96	-0.78						

			23	59	40	230	11.245	0.16
0.10	-0.99	-0.81	23	59	45	235	11.257	0.14
0.09	-1.02	-0.84	23	59	50	240	11.265	0.13
0.09	-1.05	-0.87	23	59	55	245	11.272	0.13
0.08	-1.07	-0.89	24	0	0	250	11.282	0.12
0.08	-1.11	-0.93	24	0	5	255	11.289	0.11
0.07	-1.14	-0.96	24	0	10	260	11.301	0.10
0.07	-1.19	-1.01	24	0	15	265	11.299	0.10
0.07	-1.17	-0.99	24	0	20	270	11.306	0.09
0.06	-1.21	-1.03	24	0	25	275	11.309	0.09
0.06	-1.22	-1.04	24	0	30	280	11.324	0.08
0.05	-1.30	-1.12	24	0	35	285	11.327	0.07
0.05	-1.32	-1.14						

0.04	-1.36	-1.18	24	0	40	290	11.334	0.07
0.04	-1.42	-1.24	24	0	45	295	11.342	0.06
0.04	-1.41	-1.23	24	0	50	300	11.341	0.06
0.03	-1.46	-1.28	24	0	55	305	11.348	0.05
0.03	-1.53	-1.35	24	1	0	310	11.356	0.04
0.03	-1.57	-1.39	24	1	5	315	11.359	0.04
0.03	-1.55	-1.37	24	1	10	320	11.357	0.04
0.02	-1.70	-1.52	24	1	15	325	11.370	0.03
0.01	-1.83	-1.65	24	1	20	330	11.378	0.02
0.02	-1.67	-1.49	24	1	25	335	11.368	0.03
0.02	-1.75	-1.57	24	1	30	340	11.373	0.03
0.01	-1.93	-1.75	24	1	35	345	11.382	0.02
0.01	-2.07	-1.89	24	1	40	350	11.387	0.01
0.01	-2.19	-2.01	24	1	45	355	11.390	0.01

OW-37.TXT

0.00	-4.20	-4.02	24	1	55	365	11.396	0.00
0.00	-2.63	-2.45						

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 8.24E-04 CM/SEC FALLING

OW-38.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-38

			DATE= 11/05/90
CASING		DIAMETER=	8.2 INCHES
SAND		DIAMETER=	12 INCHES
OPEN		INTERVAL=	11.29 FEET
INITIAL WATER ABOVE TRANS.=			8.48 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE (FEET)	TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS				
FALLING HEAD TEST									
1.00	0.00	0.14	18	39	40	0	9.853	1.37	
0.94	-0.02	0.11	18	39	42	2	9.777	1.30	
0.90	-0.05	0.09	18	39	44	4	9.712	1.23	
0.85	-0.07	0.07	18	39	46	6	9.645	1.16	
0.83	-0.08	0.06	18	39	48	8	9.615	1.14	
0.78	-0.11	0.03	18	39	50	10	9.548	1.07	
0.75	-0.12	0.01	18	39	52	12	9.512	1.03	
0.72	-0.14	-0.00	18	39	54	14	9.473	0.99	
0.70	-0.16	-0.02	18	39	56	16	9.438	0.96	
0.67	-0.17	-0.04	18	39	58	18	9.401	0.92	
0.65	-0.19	-0.05	18	40	0	20	9.371	0.89	
0.62	-0.20	-0.07	18	40	2	22	9.338	0.86	
0.60	-0.22	-0.08	18	40	4	24	9.309	0.83	
0.58	-0.23	-0.10	18	40	6	26	9.282	0.80	

				18	40	8	28	9.255	0.77
0.56	-0.25	-0.11		18	40	10	30	9.232	0.75
0.55	-0.26	-0.12		18	40	12	32	9.206	0.73
0.53	-0.28	-0.14		18	40	14	34	9.165	0.68
0.50	-0.30	-0.16		18	40	16	36	9.152	0.67
0.49	-0.31	-0.17		18	40	18	38	9.129	0.65
0.47	-0.33	-0.19		18	40	20	40	9.107	0.63
0.46	-0.34	-0.20		18	40	22	42	9.084	0.60
0.44	-0.36	-0.22		18	40	24	44	9.066	0.59
0.43	-0.37	-0.23		18	40	26	46	9.055	0.57
0.42	-0.38	-0.24		18	40	28	48	9.032	0.55
0.40	-0.40	-0.26		18	40	30	50	9.013	0.53
0.39	-0.41	-0.27		18	40	32	52	8.994	0.51
0.37	-0.43	-0.29		18	40	34	54	8.986	0.51
0.37	-0.43	-0.30		18	40	36	56	8.969	0.49
0.36	-0.45	-0.31		18	40	38	58	8.954	0.47
0.34	-0.46	-0.32		18	40	40	60	8.938	0.46
0.33	-0.48	-0.34		18	40	42	62	8.932	0.45
0.33	-0.48	-0.35		18	40	44	64	8.919	0.44
0.32	-0.50	-0.36		18	40	46	66	8.906	0.43
0.31	-0.51	-0.37		18	40	48	68	8.895	0.41
0.30	-0.52	-0.38		18	40	50	70	8.883	0.40
0.29	-0.53	-0.40		18	40	52	72	8.873	0.39
0.29	-0.54	-0.41		18	40	54	74	8.865	0.38
0.28	-0.55	-0.42		18	40	56	76	8.857	0.38
0.27	-0.56	-0.42		18	40	58	78	8.855	0.38
0.27	-0.56	-0.43		18	41	0	80	8.840	0.36
0.26	-0.58	-0.44		18	41	2	82	8.827	0.35
0.25	-0.60	-0.46		18	41	4	84	8.827	0.35
0.25	-0.60	-0.46		18	41	6	86	8.825	0.34
0.25	-0.60	-0.46		18	41	8	88	8.808	0.33
0.24	-0.62	-0.48		18	41	10	90	8.805	0.32

OW-38.TXT

0.24	-0.63	-0.49						
0.23	-0.63	-0.50	18	41	12	92	8.800	0.32
0.23	-0.64	-0.50	18	41	14	94	8.793	0.31
0.22 *	-0.66	-0.52	18	41	16	96	8.783	0.30
0.22	-0.65	-0.51	18	41	18	98	8.787	0.31
0.22	-0.67	-0.53	18	41	20	100	8.776	0.30
0.21	-0.67	-0.53	18	41	22	102	8.775	0.30
0.21	-0.68	-0.54	18	41	24	104	8.769	0.29
0.20	-0.69	-0.55	18	41	26	106	8.759	0.28
0.21	-0.69	-0.55	18	41	28	108	8.762	0.28
0.20	-0.70	-0.57	18	41	30	110	8.752	0.27
0.17 *	-0.76	-0.63	18	41	45	125	8.716	0.24
0.16	-0.78	-0.65	18	41	50	130	8.705	0.23
0.16	-0.81	-0.67	18	41	55	135	8.694	0.21
0.16	-0.80	-0.67	18	42	0	140	8.696	0.22
0.15	-0.83	-0.69	18	42	5	145	8.685	0.21
0.15	-0.84	-0.70	18	42	10	150	8.679	0.20
0.13	-0.88	-0.74	18	42	15	155	8.662	0.18
0.13	-0.90	-0.76	18	42	20	160	8.654	0.17
0.13	-0.89	-0.76	18	42	25	165	8.655	0.18
0.12	-0.92	-0.78	18	42	30	170	8.645	0.16

0.11	-0.95	-0.81	18	42	35	175	8.634	0.15
0.12	-0.94	-0.80	18	42	40	180	8.638	0.16
0.11	-0.96	-0.83	18	42	45	185	8.630	0.15
0.10	-1.01	-0.87	18	42	50	190	8.614	0.13
0.10	-1.00	-0.86	18	42	55	195	8.619	0.14
0.09	-1.03	-0.90	18	43	0	200	8.607	0.13

OW-38.TXT							
0.09	-1.06	-0.92	18	43	5	205	8.600
0.08	-1.07	-0.93	18	43	10	210	8.597
0.08	-1.11	-0.97	18	43	15	215	8.588
0.08	-1.08	-0.94	18	43	20	220	8.595
0.08	-1.12	-0.98	18	43	25	225	8.585
0.07	-1.13	-1.00	18	43	30	230	8.581
0.07	-1.18	-1.04	18	43	35	235	8.572
0.07	-1.17	-1.03	18	43	40	240	8.574
0.07	-1.18	-1.04	18	43	45	245	8.570
0.06	-1.21	-1.08	18	43	50	250	8.564
0.06	-1.20	-1.07	18	44	55	255	8.566
0.07	-1.18	-1.04	18	44	0	260	8.571
0.06	-1.20	-1.06	18	44	5	265	8.567
0.06	-1.24	-1.10	18	44	10	270	8.559
0.06	-1.21	-1.08	18	44	15	275	8.564
0.06	-1.23	-1.09	18	44	20	280	8.561
0.06	-1.24	-1.11	18	44	25	285	8.558
0.05	-1.26	-1.12	18	44	30	290	8.556
0.05	-1.27	-1.13	18	44	35	295	8.555
0.05	-1.28	-1.14	18	44	40	300	8.552
0.05	-1.29	-1.15	18	44	45	305	8.550
0.05	-1.30	-1.17	18	44	50	310	8.548
0.05	-1.31	-1.18	18	44	58	318	8.547
0.05	-1.33	-1.19	18	45	0	320	8.545
0.04	-1.37	-1.23	18	45	8	328	8.539
0.05	-1.34	-1.21	18	45	10	330	8.542
0.05	-1.30	-1.17	18	45	12	332	8.548
0.04	-1.37	-1.23	18	45	14	334	8.538
0.05	-1.34	-1.20	18	45	16	336	8.543
0.05	-1.30	-1.16	18	45	18	338	8.550
0.05	-1.31	-1.17	18	45	20	340	8.547
			18	45	22	342	8.547

OW-38.TXT								
			RISING	HEAD	TEST			
			18	45		26	0	7.006
0.05	-1.31	-1.17						
1.00 **	0.00	0.17	18	45		28	2	7.127
0.92	-0.04	0.13	18	45		30	4	7.208
0.86	-0.06	0.10	18	45		32	6	7.283
0.81	-0.09	0.08	18	45		34	8	7.357
0.76	-0.12	0.05	18	45		36	10	7.412
0.72	-0.14	0.03	18	45		38	12	7.463
0.69	-0.16	0.01	18	45		40	14	7.514
0.66	-0.18	-0.02	18	45		42	16	7.558
0.63	-0.20	-0.04	18	45		44	18	7.599
0.60	-0.22	-0.06	18	45		46	20	7.639
0.57	-0.24	-0.08	18	45		48	22	7.677
0.54	-0.26	-0.10	18	45		50	24	7.712
0.52	-0.28	-0.11	18	45		52	26	7.745
0.50	-0.30	-0.13	18	45		54	28	7.771
0.48	-0.32	-0.15	18	45		56	30	7.808
0.46	-0.34	-0.17	18	45		58	32	7.835
0.44	-0.36	-0.19						

0.41	-0.38	-0.21	18	46	0	34	7.868	0.61
0.41	-0.39	-0.22	18	46	2	36	7.882	0.60
0.38	-0.42	-0.25	18	46	4	38	7.918	0.56
0.37 **	-0.44	-0.27	18	46	6	40	7.940	0.54
0.35	-0.45	-0.28	18	46	8	42	7.961	0.52
0.34	-0.47	-0.30	18	46	10	44	7.983	0.50
0.32	-0.49	-0.32	18	46	12	46	8.005	0.48
0.31	-0.50	-0.33	18	46	14	48	8.017	0.46

OW-38.TXT

0.30	-0.52	-0.36	18	46	18	52	8.050	0.43
0.29	-0.53	-0.37	18	46	20	54	8.073	0.41
0.28	-0.56	-0.39	18	46	22	56	8.088	0.39
0.27	-0.58	-0.41	18	46	24	58	8.103	0.38
0.26	-0.59	-0.42	18	46	26	60	8.123	0.36
0.24	-0.62	-0.45	18	46	28	62	8.129	0.35
0.24	-0.62	-0.45	18	46	30	64	8.149	0.33
0.22	-0.65	-0.48	18	46	32	66	8.159	0.32
0.22	-0.66	-0.49	18	46	34	68	8.168	0.31
0.21	-0.67	-0.51	18	46	36	70	8.189	0.29
0.20	-0.70	-0.54	18	46	38	72	8.193	0.29
0.19	-0.71	-0.54	18	46	40	74	8.207	0.27
0.19	-0.73	-0.56	18	46	42	76	8.216	0.26
0.18	-0.75	-0.58	18	46	44	78	8.221	0.26
0.18	-0.76	-0.59	18	46	46	80	8.230	0.25
0.17	-0.77	-0.60	18	46	48	82	8.240	0.24
0.16	-0.79	-0.62	18	46	50	84	8.247	0.23
0.16	-0.80	-0.63	18	46	52	86	8.247	0.23
0.16	-0.80	-0.63	18	46	54	88	8.258	0.22
0.15	-0.82	-0.65	18	46	56	90	8.275	0.21
0.14	-0.86	-0.69	18	46	58	92	8.283	0.20
0.13	-0.87	-0.71	18	47	5	99	8.296	0.18
0.13	-0.90	-0.73	18	47	10	104	8.320	0.16
0.11	-0.96	-0.80	18	47	15	109	8.331	0.15
0.10	-0.99	-0.83	18	47	20	114	8.336	0.14
0.10	-1.01	-0.84	18	47	25	119	8.356	0.12
0.08	-1.07	-0.91	18	47	30	124	8.365	0.11
0.08	-1.11	-0.94	18	47	35	129	8.379	0.10
0.07	-1.16	-0.99	18	47	40	134	8.380	0.10
0.07	-1.17	-1.00	18	47	45	139	8.381	0.10
0.07	-1.17	-1.01	18	47	50	144	8.387	0.09
0.06	-1.20	-1.03						

OW-38.TXT								
			18	47	55	149	8.403	0.08
0.05	-1.28	-1.11	18	48	0	154	8.399	0.08
0.05	-1.26	-1.09	18	48	5	159	8.414	0.07
0.04	-1.35	-1.18	18	48	10	164	8.416	0.06
0.04	-1.36	-1.20	18	48	15	169	8.412	0.07
0.05	-1.34	-1.17	18	48	20	174	8.424	0.06
0.04	-1.42	-1.26	18	48	25	179	8.428	0.05
0.04	-1.46	-1.29	18	48	30	184	8.429	0.05
0.03	-1.46	-1.29	18	48	35	189	8.430	0.05
0.03	-1.47	-1.30	18	48	40	194	8.438	0.04
0.03	-1.55	-1.38	18	48	45	199	8.444	0.04
0.02	-1.62	-1.45	18	48	50	204	8.452	0.03
0.02	-1.72	-1.55	18	48	55	209	8.449	0.03
0.02	-1.67	-1.50	18	49	0	214	8.453	0.03
0.02	-1.73	-1.56	18	49	5	219	8.454	0.03
0.02	-1.75	-1.58	18	49	10	224	8.469	0.01
0.01	-2.13	-1.96						

			18	49	15	229	8.445	0.04
0.02	-1.62	-1.45	18	49	20	234	8.451	0.03
0.02	-1.70	-1.53	18	49	25	239	8.451	0.03
0.02	-1.71	-1.54	18	49	30	244	8.456	0.02
0.02	-1.78	-1.61	18	49	35	249	8.463	0.02
0.01	-1.95	-1.78	18	49	40	254	8.468	0.01
0.01	-2.10	-1.93	18	49	45	259	8.466	0.01
0.01	-2.03	-1.86	18	49	50	264	8.468	0.01
0.01	-2.08	-1.91	18	49	55	269	8.476	0.00
0.00	-2.58	-2.41	18	50	0	274	8.473	0.01
0.00	-2.30	-2.13	18	50	5	279	8.475	0.00

OW-38.TXT

0.00	-2.49	-2.32		18	50	10	284	8.474	0.01
0.00	-2.41	-2.24	*	18	50	15	289	8.479	0.00
0.00	-3.13	-2.96							

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 4.21E-03 CM/SEC FALLING

OW-39.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-39

		DATE= 11/07/90
CASING	DIAMETER=	7.04 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	7.89 FEET
INITIAL WATER ABOVE TRANS.=		7.2 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00	0.00	0.06	15	10	34	0	8.360	1.16
0.98	-0.01	0.05	15	10	36	2	8.334	1.13
0.96	-0.02	0.05	15	10	38	4	8.310	1.11
0.93	-0.03	0.04	15	10	40	6	8.284	1.08
0.91	-0.04	0.02	15	10	42	8	8.253	1.05
0.86	-0.06	0.00	15	10	44	10	8.203	1.00
0.83	-0.08	-0.02	15	10	46	12	8.163	0.96
0.86	-0.07	-0.00	15	10	48	14	8.193	0.99
0.83	-0.08	-0.02	15	10	50	16	8.162	0.96
0.81	-0.09	-0.03	15	10	52	18	8.142	0.94
0.80	-0.10	-0.03	15	10	54	20	8.127	0.93
0.79	-0.10	-0.04	15	10	56	22	8.118	0.92
0.76	-0.12	-0.06	15	10	58	24	8.080	0.88
0.76	-0.12	-0.05	15	11	0	26	8.086	0.89

			15	11	2	28	8.071	0.87
0.75	-0.12	-0.06	15	11	4	30	8.062	0.86
0.74	-0.13	-0.06	15	11	6	32	8.011	0.81
0.70	-0.16	-0.09	15	11	8	34	8.044	0.84
0.73	-0.14	-0.07	15	11	10	36	8.029	0.83
0.71	-0.15	-0.08	15	11	12	38	8.018	0.82
0.71	-0.15	-0.09	15	11	14	40	8.022	0.82
0.71	-0.15	-0.09	15	11	16	42	8.011	0.81
0.70	-0.16	-0.09	15	11	18	44	8.011	0.81
0.70	-0.16	-0.09	15	11	20	46	7.990	0.79
0.68	-0.17	-0.10	15	11	22	48	7.951	0.75
0.65	-0.19	-0.12	15	11	24	50	7.990	0.79
0.68	-0.17	-0.10	15	11	26	52	7.980	0.78
0.67	-0.17	-0.11	15	11	28	54	7.969	0.77
0.66	-0.18	-0.11	15	11	30	56	7.972	0.77
0.67	-0.18	-0.11	15	11	32	58	7.963	0.76
0.66	-0.18	-0.12	15	11	34	60	7.959	0.76
0.65	-0.18	-0.12	15	11	36	62	7.964	0.76
0.66	-0.18	-0.12	15	11	38	64	7.948	0.75
0.64	-0.19	-0.13	15	11	40	66	7.945	0.75
0.64	-0.19	-0.13	15	11	42	68	7.940	0.74
0.64	-0.20	-0.13	15	11	44	70	7.943	0.74
0.64	-0.19	-0.13	15	11	46	72	7.940	0.74
0.64	-0.19	-0.13	15	11	48	74	7.924	0.72
0.62	-0.20	-0.14	15	11	50	76	7.909	0.71
0.61 *	-0.21	-0.15	15	11	52	78	7.928	0.73
0.63	-0.20	-0.14	15	11	54	80	7.911	0.71
0.61	-0.21	-0.15	15	11	56	82	7.902	0.70
0.61	-0.22	-0.15	15	11	58	84	7.896	0.70
0.60	-0.22	-0.16	15	12	0	86	7.897	0.70
0.60	-0.22	-0.16	15	12	2	88	7.904	0.70
0.61	-0.22	-0.15	15	12	4	90	7.890	0.69

OW-39.TXT								
0.60	-0.23	-0.16	15	12	6	92	7.903	0.70
0.61	-0.22	-0.15	15	12	8	94	7.890	0.69
0.59	-0.23	-0.16	15	12	10	96	7.874	0.67
0.58	-0.24	-0.17	15	12	12	98	7.873	0.67
0.58	-0.24	-0.17	15	12	14	100	7.871	0.67
0.58	-0.24	-0.17	15	12	16	102	7.862	0.66
0.57	-0.24	-0.18	15	12	18	104	7.850	0.65
0.56	-0.25	-0.19	15	12	20	106	7.847	0.65
0.56	-0.25	-0.19	15	12	22	108	7.852	0.65
0.56	-0.25	-0.19	15	12	24	110	7.852	0.65
0.55	-0.26	-0.19	15	12	26	112	7.840	0.64
0.51	-0.29	-0.22	15	12	45	131	7.796	0.60
0.48 *	-0.31	-0.25	15	13	0	146	7.762	0.56
0.46	-0.34	-0.27	15	13	15	161	7.736	0.54
0.44	-0.36	-0.30	15	13	30	176	7.705	0.51
0.41	-0.38	-0.32	15	13	45	191	7.679	0.48
0.42	-0.37	-0.31	15	14	0	206	7.690	0.49
0.37	-0.43	-0.37	15	14	15	221	7.631	0.43
0.38	-0.42	-0.35	15	14	30	236	7.645	0.45
0.34	-0.47	-0.41	15	14	45	251	7.591	0.39
0.26	-0.59	-0.52	15	16	0	326	7.499	0.30
0.24	-0.62	-0.55	15	17	0	386	7.479	0.28
0.18	-0.75	-0.69	15	18	0	446	7.406	0.21

0.16	-0.81	-0.74	15	19	0	506	7.380	0.18
0.15	-0.81	-0.75	15	20	0	566	7.378	0.18
0.13	-0.88	-0.81	15	21	0	626	7.354	0.15

OW-39.TXT							
			15	22	0	686	7.267
0.06	-1.24	-1.17	15	22	0	686	7.267
0.06	-1.21	-1.15	15	22	30	716	7.271
0.06	-1.22	-1.16	15	22	32	718	7.270
0.08	-1.08	-1.02	15	22	40	726	7.296
0.08	-1.08	-1.01	15	22	42	728	7.297
0.07	-1.18	-1.12	15	22	44	730	7.276
RISING HEAD TEST							
1.00	0.00	0.15	15	22	46	0	5.775
0.96	-0.02	0.14	15	22	48	2	5.825
0.94	-0.03	0.13	15	22	50	4	5.863
0.92	-0.04	0.12	15	22	52	6	5.887
0.90 **	-0.05	0.11	15	22	54	8	5.922
0.88	-0.05	0.10	15	22	56	10	5.940
0.86	-0.06	0.09	15	22	58	12	5.969
0.86	-0.07	0.09	15	23	0	14	5.974
0.85	-0.07	0.08	15	23	2	16	5.995
0.83	-0.08	0.07	15	23	4	18	6.015
0.82	-0.08	0.07	15	23	6	20	6.025
0.82	-0.09	0.07	15	23	8	22	6.038
0.81	-0.09	0.06	15	23	10	24	6.049
0.79	-0.10	0.05	15	23	12	26	6.074
0.78	-0.11	0.05	15	23	14	28	6.088
0.78	-0.11	0.05	15	23	16	30	6.089
0.77	-0.11	0.04	15	23	18	32	6.102
0.75	-0.12	0.03	15	23	20	34	6.130
0.75	-0.13	0.03	15	23	22	36	6.133
0.74	-0.13	0.02	15	23	24	38	6.143
0.72	-0.14	0.01	15	23	26	40	6.167
0.72	-0.14	0.01	15	23	28	42	6.170
0.72	-0.15	0.01	15	23	30	44	6.180
0.70	-0.15	0.00	15	23	32	46	6.196
0.70	-0.16	-0.00	15	23	34	48	6.205

0W-39.TXT							
			15	23	36	50	6.219
0.69	-0.16	-0.01	15	23	36	50	6.219
0.68	-0.17	-0.01	15	23	38	52	6.229
0.67	-0.17	-0.02	15	23	40	54	6.245
0.66	-0.18	-0.02	15	23	42	56	6.255
0.65 **	-0.18	-0.03	15	23	44	58	6.268
0.65	-0.19	-0.03	15	23	46	60	6.274
0.64	-0.20	-0.04	15	23	48	62	6.294
0.63	-0.20	-0.04	15	23	50	64	6.296
0.63	-0.20	-0.05	15	23	52	66	6.303
0.62	-0.21	-0.06	15	23	54	68	6.321
0.61	-0.21	-0.06	15	23	56	70	6.327
0.61	-0.22	-0.06	15	23	58	72	6.333
0.60	-0.22	-0.07	15	24	0	74	6.349
0.59	-0.23	-0.07	15	24	2	76	6.353
0.58	-0.23	-0.08	15	24	4	78	6.368
0.58	-0.23	-0.08	15	24	6	80	6.367
0.57	-0.24	-0.09	15	24	8	82	6.386
0.57	-0.24	-0.09	15	24	10	84	6.385
0.56	-0.25	-0.10	15	24	12	86	6.402
0.56	-0.25	-0.10	15	24	14	88	6.406
0.55	-0.26	-0.11	15	24	16	90	6.422
							0.78

0.54	-0.27	-0.11	15	24	18	92	6.426	0.77
0.54	-0.27	-0.12	15	24	20	94	6.434	0.77
0.53	-0.28	-0.12	15	24	22	96	6.444	0.76
0.53	-0.28	-0.13	15	24	24	98	6.451	0.75
0.52	-0.28	-0.13	15	24	26	100	6.454	0.75
				24	28	102	6.467	0.73

OW-39.TXT

0.51	-0.29	-0.14	15	24	30	104	6.474	0.73
0.51	-0.29	-0.14	15	24	32	106	6.480	0.72
0.51	-0.30	-0.14	15	24	34	108	6.485	0.71
0.50	-0.30	-0.15	15	24	36	110	6.490	0.71
0.50	-0.30	-0.15	15	24	38	112	6.501	0.70
0.49	-0.31	-0.16	15	24	40	114	6.507	0.69
0.49	-0.31	-0.16	15	24	42	116	6.513	0.69
0.48	-0.32	-0.16	15	24	44	118	6.518	0.68
0.48	-0.32	-0.17	15	24	46	120	6.517	0.68
0.48	-0.32	-0.17	15	24	48	122	6.528	0.67
0.47	-0.33	-0.17	15	24	50	124	6.531	0.67
0.47	-0.33	-0.17	15	24	52	126	6.537	0.66
0.46	-0.33	-0.18	15	24	54	128	6.544	0.66
0.46	-0.34	-0.18	15	24	56	130	6.554	0.65
0.45	-0.34	-0.19	15	24	58	132	6.555	0.64
0.45	-0.34	-0.19	15	25	0	134	6.562	0.64
0.45	-0.35	-0.20	15	25	15	149	6.594	0.61
0.42	-0.37	-0.22	15	25	30	164	6.627	0.57
0.40	-0.40	-0.24	15	25	45	179	6.658	0.54
0.38	-0.42	-0.27	15	26	0	194	6.683	0.52
0.36	-0.44	-0.29	15	26	15	209	6.706	0.49
0.35	-0.46	-0.31	15	26	30	224	6.728	0.47
0.33	-0.48	-0.33	15	26	45	239	6.748	0.45
0.32	-0.50	-0.35	15	27	0	254	6.774	0.43
0.30	-0.52	-0.37	15	27	15	269	6.792	0.41
0.29	-0.54	-0.39	15	27	30	284	6.806	0.39
0.28	-0.56	-0.40	15	27	45	299	6.828	0.37
0.26	-0.58	-0.43	15	28	0	314	6.841	0.36
0.25	-0.60	-0.45	15	28	15	329	6.850	0.35
0.25	-0.61	-0.46	15	28	30	344	6.864	0.34
0.24	-0.63	-0.47	15	28	45	359	6.875	0.32
0.23	-0.64	-0.49						

0W-39.TXT
15 29 0 374 6.886 0.31
0.22 -0.66 -0.50

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.62E-03 CM/SEC FALLING

893-6255

OW-40.TXT
DECEMBER 1990

VARIABLE HEAD TEST

WELL NO. OW-40

DATE= 11/07/90

CASING	DIAMETER=	8.2 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	4.82 FEET
INITIAL WATER ABOVE TRANS.=		7.64 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)		HEAD (FEET)
			HOURS	MINUTES	SECONDS		TIME (FEET)		
FALLING HEAD TEST									
1.00	0.00	0.11	12	1	32	0	8.924	1.28	
0.46	-0.34	-0.23	12	1	34	2	8.233	0.59	
0.34 *	-0.47	-0.36	12	1	36	4	8.077	0.44	
0.29	-0.53	-0.43	12	1	38	6	8.015	0.38	
0.24	-0.62	-0.51	12	1	40	8	7.950	0.31	
0.19	-0.71	-0.60	12	1	42	10	7.889	0.25	
0.17	-0.77	-0.66	12	1	44	12	7.859	0.22	
0.17 *	-0.76	-0.65	12	1	46	14	7.865	0.22	
0.14	-0.86	-0.75	12	1	48	16	7.819	0.18	
0.14	-0.84	-0.73	12	1	50	18	7.824	0.18	
0.13	-0.90	-0.79	12	1	52	20	7.803	0.16	
0.12	-0.93	-0.82	12	1	54	22	7.792	0.15	
0.11	-0.94	-0.83	12	1	56	24	7.787	0.15	
0.12	-0.91	-0.80	12	1	58	26	7.797	0.16	

			OW-40.TXT					
0.12	-0.92	-0.82	12	2	0	28	7.793	0.15
0.10	-0.98	-0.87	12	2	2	30	7.774	0.13
0.10	-0.99	-0.89	12	2	4	32	7.770	0.13
0.10	-0.99	-0.88	12	2	6	34	7.773	0.13
0.10	-1.01	-0.90	12	2	8	36	7.767	0.13
0.08	-1.09	-0.98	12	2	10	38	7.745	0.10
0.08	-1.09	-0.98	12	2	12	40	7.744	0.10
0.09	-1.07	-0.96	12	2	14	42	7.749	0.11
0.08	-1.10	-0.99	12	2	16	44	7.742	0.10
0.09	-1.04	-0.94	12	2	18	46	7.756	0.12
0.08	-1.10	-0.99	12	2	20	48	7.741	0.10
0.07	-1.13	-1.02	12	2	22	50	7.736	0.10
0.08	-1.11	-1.00	12	2	24	52	7.740	0.10
0.07	-1.15	-1.04	12	2	26	54	7.731	0.09
0.07	-1.13	-1.03	12	2	28	56	7.734	0.09
0.07	-1.15	-1.04	12	2	30	58	7.731	0.09
0.08	-1.11	-1.00	12	2	32	60	7.739	0.10
0.07	-1.16	-1.05	12	2	34	62	7.728	0.09
0.07	-1.17	-1.06	12	2	36	64	7.727	0.09
0.06	-1.19	-1.08	12	2	38	66	7.723	0.08
0.08	-1.12	-1.01	12	2	42	70	7.738	0.10
0.07	-1.13	-1.02	12	2	44	72	7.735	0.09
0.06	-1.24	-1.13	12	2	46	74	7.715	0.07
0.06	-1.24	-1.13	12	2	48	76	7.713	0.07
0.06	-1.20	-1.09	12	2	50	78	7.721	0.08
0.06	-1.20	-1.09	12	2	52	80	7.722	0.08
0.06	-1.24	-1.13	12	2	54	82	7.714	0.07
0.06	-1.21	-1.10	12	2	56	84	7.719	0.08
0.05	-1.27	-1.16	12	2	58	86	7.709	0.07
0.07	-1.16	-1.05	12	3	0	88	7.729	0.09

OW-40.TXT

0.05	-1.27	-1.16	12	3	2	90	7.710	0.07
0.06	-1.23	-1.12	12	3	4	92	7.715	0.08
0.05	-1.32	-1.21	12	3	6	94	7.702	0.06
0.05	-1.27	-1.16	12	3	8	96	7.709	0.07
0.04	-1.35	-1.24	12	3	10	98	7.698	0.06
0.05	-1.29	-1.18	12	3	12	100	7.706	0.07
0.05	-1.28	-1.17	12	3	14	102	7.708	0.07
0.05	-1.30	-1.19	12	3	20	108	7.705	0.06
0.05	-1.33	-1.22	12	3	25	113	7.700	0.06
0.05	-1.32	-1.22	12	3	30	118	7.701	0.06
0.05	-1.29	-1.18	12	3	35	123	7.706	0.07
0.04	-1.37	-1.26	12	3	40	128	7.694	0.05
0.05	-1.31	-1.20	12	3	45	133	7.702	0.06
0.05	-1.30	-1.19	12	3	50	138	7.705	0.06
0.05	-1.34	-1.23	12	4	0	143	7.699	0.06
0.04	-1.40	-1.29	12	4	5	148	7.691	0.05
0.04	-1.40	-1.29	12	4	10	153	7.691	0.05
0.04	-1.42	-1.31	12	4	15	158	7.689	0.05
0.04	-1.42	-1.31	12	4	20	163	7.689	0.05
0.04	-1.35	-1.24	12	4	25	168	7.697	0.06
0.04	-1.41	-1.30	12	4	30	173	7.690	0.05
0.04	-1.42	-1.31	12	4	35	178	7.689	0.05
0.04	-1.42	-1.31	12	4	40	183	7.689	0.05
0.04	-1.36	-1.25	12	4	45	188	7.696	0.06
0.04	-1.42	-1.32	12	4	50	193	7.688	0.05
0.04	-1.44	-1.33	12	4	55	198	7.686	0.05
0.04	-1.45	-1.34	12	5	0	203	7.686	0.05
0.04	-1.38	-1.27				208	7.693	0.05

OW-40.TXT								
			12	5	5	213	7.697	0.06
0.04	-1.35	-1.25	12	5	10	218	7.684	0.04
0.03	-1.46	-1.35	12	5	15	223	7.686	0.05
0.04	-1.44	-1.34	12	5	20	228	7.691	0.05
0.04	-1.40	-1.29	12	5	25	233	7.684	0.04
0.03	-1.46	-1.35	12	5	30	238	7.682	0.04
0.03	-1.48	-1.37	12	5	40	248	7.682	0.04
0.03	-1.48	-1.37	12	5	42	250	7.689	0.05
0.04	-1.42	-1.31	12	5	44	252	7.676	0.04
0.03	-1.55	-1.44	12	6	0	268	7.686	0.05
0.04	-1.44	-1.34	12	6	2	270	7.684	0.04
0.03	-1.47	-1.36	12	6	4	272	7.674	0.03
0.03	-1.58	-1.47	12	6	6	274	7.664	0.02
0.02	-1.72	-1.61	12	6	8	276	7.664	0.02
0.02	-1.72	-1.61	RISING HEAD TEST					
1.00 **	0.00	0.20	12	6	10	0	6.050	1.59
0.91	-0.04	0.16	12	6	12	2	6.189	1.45
0.84	-0.08	0.13	12	6	14	4	6.303	1.34
0.76	-0.12	0.08	12	6	16	6	6.427	1.21
0.70	-0.15	0.05	12	6	18	8	6.522	1.12
0.66	-0.18	0.02	12	6	20	10	6.594	1.05
0.62	-0.21	-0.01	12	6	22	12	6.662	0.98
0.56	-0.25	-0.05	12	6	24	14	6.749	0.89
0.52	-0.28	-0.08	12	6	26	16	6.805	0.83
0.49	-0.31	-0.11	12	6	28	18	6.864	0.78
0.45	-0.34	-0.14	12	6	30	20	6.919	0.72
0.42	-0.38	-0.17	12	6	32	22	6.970	0.67
0.39	-0.41	-0.20	12	6	34	24	7.016	0.62

OW-40.TXT

0.37	-0.44	-0.24	12	6	36	26	7.058	0.58
0.34	-0.47	-0.27	12	6	38	28	7.100	0.54
0.31	-0.51	-0.31	12	6	40	30	7.145	0.49
0.29	-0.53	-0.33	12	6	42	32	7.174	0.47
0.27	-0.57	-0.36	12	6	44	34	7.208	0.43
0.25	-0.60	-0.40	12	6	46	36	7.237	0.40
0.23	-0.63	-0.43	12	6	48	38	7.267	0.37
0.22	-0.66	-0.46	12	6	50	40	7.295	0.34
0.20 **	-0.70	-0.50	12	6	52	42	7.321	0.32
0.19	-0.73	-0.52	12	6	54	44	7.341	0.30
0.18	-0.75	-0.55	12	6	56	46	7.358	0.28
0.17	-0.78	-0.58	12	7	0	50	7.397	0.24
0.15	-0.82	-0.61	12	7	2	52	7.407	0.23
0.15	-0.83	-0.63	12	7	4	54	7.422	0.22
0.14	-0.86	-0.66	12	7	6	56	7.434	0.21
0.13	-0.89	-0.69	12	7	8	58	7.449	0.19
0.12	-0.92	-0.72	12	7	10	60	7.454	0.19
0.12	-0.93	-0.73	12	7	12	62	7.467	0.17
0.11	-0.96	-0.76	12	7	14	64	7.471	0.17
0.11	-0.97	-0.77	12	7	16	66	7.479	0.16
0.10	-0.99	-0.79	12	7	18	68	7.489	0.15
0.10	-1.02	-0.82	12	7	20	70	7.491	0.15
0.09	-1.03	-0.83	12	7	22	72	7.500	0.14
0.09	-1.06	-0.85	12	7	24	74	7.510	0.13
0.08	-1.09	-0.88	12	7	26	76	7.511	0.13
0.08	-1.09	-0.89	12	7	28	78	7.518	0.12
0.08	-1.12	-0.91	12	7	30	80	7.522	0.12
0.07	-1.13	-0.93	12	7	32	82	7.522	0.12
0.07	-1.13	-0.93	12	7	34	84	7.534	0.11
0.07	-1.17	-0.97	12	7	36	86	7.536	0.10

OW-40.TXT

0.07	-1.18	-0.98		12	7	38	88	7.531	0.11
0.07	-1.16	-0.96		12	7	40	90	7.545	0.10
0.06	-1.22	-1.02		12	7	42	92	7.557	0.08
0.05	-1.28	-1.08		12	7	44	94	7.552	0.09
0.06	-1.26	-1.06		12	7	46	96	7.555	0.09
0.05	-1.27	-1.07		12	7	48	98	7.554	0.09
0.05	-1.27	-1.06		12	7	50	100	7.567	0.07
0.05	-1.34	-1.14		12	7	52	102	7.565	0.08
0.05	-1.32	-1.12		12	7	54	104	7.566	0.07
0.05	-1.33	-1.13		12	7	56	106	7.567	0.07
0.05	-1.34	-1.14		12	7	58	108	7.574	0.07
0.04	-1.38	-1.18		12	8	0	110	7.570	0.07
0.04	-1.36	-1.15		12	8	2	112	7.578	0.06
0.04	-1.41	-1.20		12	8	4	114	7.580	0.06
0.04	-1.42	-1.22		12	8	6	116	7.580	0.06
0.04	-1.42	-1.22		12	8	8	118	7.585	0.06
0.03	-1.46	-1.26		12	8	10	120	7.593	0.05
0.03	-1.53	-1.33		12	8	12	122	7.591	0.05
0.03	-1.51	-1.31		12	8	14	124	7.595	0.05
0.03	-1.55	-1.35		12	8	16	126	7.590	0.05
0.03	-1.51	-1.30		12	8	18	128	7.588	0.05
0.03	-1.49	-1.29		12	8	20	130	7.602	0.04
0.02	-1.63	-1.42		12	8	22	132	7.599	0.04
0.03	-1.59	-1.39		12	8	24	134	7.604	0.04
0.02	-1.65	-1.45		12	8	26	136	7.607	0.03
0.02	-1.69	-1.48							

0.02	-1.72	-1.52	12	8	28	138	7.610	0.03
------	-------	-------	----	---	----	-----	-------	------

			12	8	30	140	7.607	0.03
0.02	-1.68	-1.48	12	8	32	142	7.604	0.04
0.02	-1.65	-1.45	12	8	34	144	7.600	0.04
0.02	-1.60	-1.40	12	8	36	146	7.606	0.03
0.02	-1.67	-1.47	12	8	38	148	7.610	0.03
0.02	-1.73	-1.53						

--

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 5.56E-02 CM/SEC FALLING

OW-41.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-41

		DATE= 11/07/90
CASING	DIAMETER=	7.04 INCHES
SAND	DIAMETER=	10 INCHES
OPEN	INTERVAL=	11.6 FEET
INITIAL WATER ABOVE TRANS.=		7.5 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00	0.00	-0.30	14	29	10	0	8.001	0.50
0.68	-0.17	-0.47	14	29	12	2	7.840	0.34
0.54	-0.27	-0.57	14	29	14	4	7.771	0.27
0.47 *	-0.33	-0.63	14	29	16	6	7.734	0.23
0.40	-0.39	-0.69	14	29	18	8	7.702	0.20
0.36	-0.44	-0.74	14	29	20	10	7.683	0.18
0.34	-0.47	-0.76	14	29	22	12	7.672	0.17
0.32	-0.49	-0.79	14	29	24	14	7.660	0.16
0.30	-0.52	-0.82	14	29	26	16	7.650	0.15
0.27 *	-0.56	-0.86	14	29	28	18	7.637	0.14
0.33	-0.48	-0.78	14	29	30	20	7.665	0.17
0.26	-0.59	-0.89	14	29	32	22	7.628	0.13
0.26	-0.59	-0.89	14	29	34	24	7.630	0.13
0.24	-0.62	-0.92	14	29	36	26	7.620	0.12
0.23	-0.63	-0.93	14	29	38	28	7.618	0.12
0.25	-0.60	-0.90	14	29	40	30	7.626	0.13
0.29	-0.54	-0.84	14	29	42	32	7.646	0.15
0.22	-0.65	-0.95	14	29	44	34	7.612	0.11
0.29	-0.54	-0.84	14	29	46	36	7.644	0.14

			14	29	48	38	7.622	0.12
0.24	-0.62	-0.92						

			14	29	50	40	7.619	0.12
0.24	-0.63	-0.93	14	29	50	40	7.619	0.12
0.22	-0.66	-0.96	14	29	52	42	7.611	0.11
0.28	-0.55	-0.85	14	29	54	44	7.642	0.14
0.22	-0.65	-0.95	14	29	56	46	7.613	0.11
0.28	-0.55	-0.85	14	30	58	48	7.642	0.14
0.21	-0.68	-0.98	14	30	0	50	7.606	0.11
0.22	-0.66	-0.96	14	30	2	52	7.608	0.11
0.24	-0.62	-0.92	14	30	4	54	7.620	0.12
0.24	-0.63	-0.93	14	30	6	56	7.619	0.12
0.24	-0.63	-0.93	14	30	8	58	7.619	0.12
0.17	-0.76	-1.06	14	30	10	60	7.586	0.09
0.28	-0.55	-0.85	14	30	12	62	7.641	0.14
0.23	-0.64	-0.94	14	30	14	64	7.614	0.11
0.24	-0.63	-0.93	14	30	16	66	7.618	0.12
0.21	-0.67	-0.97	14	30	18	68	7.606	0.11
0.21	-0.68	-0.98	14	30	20	70	7.606	0.11
0.23	-0.64	-0.94	14	30	22	72	7.614	0.11
0.27	-0.56	-0.86	14	30	30	80	7.637	0.14
0.21	-0.68	-0.98	14	30	35	85	7.605	0.11
0.20	-0.69	-0.99	14	30	40	90	7.602	0.10
0.12	-0.93	-1.23	14	30	45	95	7.559	0.06
0.20	-0.70	-1.00	14	30	50	100	7.601	0.10
0.21	-0.69	-0.99	14	31	55	105	7.603	0.10
0.21	-0.69	-0.98	14	31	0	110	7.604	0.10
0.26	-0.58	-0.88	14	31	5	115	7.631	0.13

OW-41.TXT

0.26	-0.59	-0.89	14	31	15	125	7.600	0.10
0.20	-0.70	-1.00	14	31	20	130	7.602	0.10
0.20	-0.69	-0.99	14	31	25	135	7.628	0.13
0.26	-0.59	-0.89	14	31	30	140	7.601	0.10
0.20	-0.70	-1.00	14	31	35	145	7.598	0.10
0.20	-0.71	-1.01	14	31	40	150	7.630	0.13
0.26	-0.59	-0.89	14	31	45	155	7.600	0.10
0.20	-0.70	-1.00	14	31	50	160	7.599	0.10
0.20	-0.71	-1.01	14	31	55	165	7.627	0.13
0.25	-0.60	-0.90	14	32	0	170	7.600	0.10
0.20	-0.70	-1.00	14	32	5	175	7.600	0.10
0.20	-0.70	-1.00	14	32	10	180	7.599	0.10
0.20	-0.70	-1.00	14	32	15	185	7.599	0.10
0.20	-0.71	-1.01	14	32	20	190	7.597	0.10
0.19	-0.71	-1.01	14	32	25	195	7.594	0.09
0.19	-0.73	-1.03	14	32	30	200	7.596	0.10
0.19	-0.72	-1.02	14	32	35	205	7.596	0.10
0.19	-0.72	-1.02	14	32	40	210	7.593	0.09
0.19	-0.73	-1.03	14	32	45	215	7.595	0.09
0.19	-0.72	-1.02	14	32	50	220	7.593	0.09
0.19	-0.73	-1.03	14	32	55	225	7.598	0.10
0.20	-0.71	-1.01	14	33	0	230	7.595	0.10
0.19	-0.72	-1.02	14	33	5	235	7.591	0.09
0.18	-0.74	-1.04	14	33	10	240	7.591	0.09
0.18	-0.74	-1.04	14	33	15	245	7.622	0.12
0.24	-0.61	-0.91	14	33	35	265	7.587	0.09
0.17	-0.76	-1.06	14	33	40	270	7.585	0.09
0.17	-0.77	-1.07	14	33	45	275	7.585	0.08
0.17	-0.77	-1.07	14	33	58	288	7.588	0.09
0.18	-0.76	-1.06	14	34	0	290	7.586	0.09
0.17	-0.77	-1.07						

OW-41.TXT

				14	34	2	292	7.590	0.09
				14	34	4	294	7.580	0.08
				14	34	6	296	7.341	-0.16
		ERR	ERR	RISING	HEAD	TEST			
				14	34	8	0	6.231	1.27
1.00 **	0.00	0.10		14	34	10	2	6.396	1.10
0.87	-0.06	0.04		14	34	12	4	6.529	0.97
0.77	-0.12	-0.01		14	34	14	6	6.654	0.85
0.67	-0.18	-0.07		14	34	16	8	6.764	0.74
0.58	-0.24	-0.13		14	34	18	10	6.858	0.64
0.51 **	-0.30	-0.19		14	34	20	12	6.945	0.55
0.44	-0.36	-0.26		14	34	22	14	7.023	0.48
0.38	-0.42	-0.32		14	34	24	16	7.103	0.40
0.31	-0.50	-0.40		14	34	26	18	7.161	0.34
0.27	-0.57	-0.47		14	34	28	20	7.187	0.31
0.25	-0.61	-0.50		14	34	30	22	7.236	0.26
0.21	-0.68	-0.58		14	34	32	24	7.265	0.23
0.19	-0.73	-0.63		14	34	34	26	7.317	0.18
0.14	-0.84	-0.74		14	34	36	28	7.315	0.18
0.15	-0.84	-0.73		14	34	38	30	7.332	0.17
0.13	-0.88	-0.78		14	34	40	32	7.356	0.14
0.11	-0.94	-0.84		14	34	42	34	7.369	0.13
0.10	-0.99	-0.88		14	34	44	36	7.385	0.12
0.09	-1.04	-0.94		14	34	46	38	7.389	0.11
0.09	-1.06	-0.95		14	34	48	40	7.402	0.10
0.08	-1.11	-1.01		14	34	50	42	7.406	0.09
0.07	-1.13	-1.03		14	34	52	44	7.449	0.05
0.04	-1.40	-1.29		14	34	54	46	7.453	0.05
0.04	-1.44	-1.33							

OW-41.TXT								
0.06	-1.25	-1.14	14	34	56	48	7.428	0.07
0.05	-1.27	-1.17	14	34	58	50	7.432	0.07
0.02	-1.65	-1.55	14	35	0	52	7.472	0.03
0.05	-1.33	-1.23	14	35	2	54	7.441	0.06
0.02	-1.79	-1.69	14	35	4	56	7.480	0.02
0.04	-1.39	-1.29	14	35	6	58	7.449	0.05
0.04	-1.45	-1.35	14	35	8	60	7.455	0.04
0.01	-1.95	-1.85	14	35	10	62	7.486	0.01
0.04	-1.45	-1.34	14	35	12	64	7.455	0.05
0.03	-1.56	-1.45	14	35	14	66	7.465	0.04
0.01	-2.18	-2.08	14	35	16	68	7.492	0.01
0.03	-1.59	-1.48	14	35	18	70	7.467	0.03
0.02	-1.69	-1.59	14	35	22	74	7.474	0.03
0.02	-1.62	-1.51	14	35	24	76	7.469	0.03
0.02	-1.63	-1.52	14	35	26	78	7.470	0.03
-0.01	ERR	ERR	14	35	28	80	7.508	-0.01
0.02	-1.71	-1.61	14	35	30	82	7.475	0.02
0.01	-1.88	-1.78	14	35	32	84	7.483	0.02
0.01	-1.90	-1.80	14	35	34	86	7.484	0.02
0.01	-1.88	-1.78	14	35	36	88	7.483	0.02
0.01	-1.89	-1.78	14	35	38	90	7.484	0.02
0.01	-2.02	-1.92	14	35	40	92	7.488	0.01
0.02	-1.81	-1.71	14	35	42	94	7.480	0.02
0.01	-1.92	-1.82	14	35	44	96	7.485	0.02
0.01	-2.10	-2.00	14	35	46	98	7.490	0.01
0.01	-2.18	-2.08	14	35	48	100	7.492	0.01
-0.02	ERR	ERR	14	36	0	112	7.522	-0.02
0.01	-2.12	-2.02	14	36	5	117	7.490	0.01

OW-41.TXT

-0.02		ERR	ERR	14	36	10	122	7.523	-0.02
0.01	-2.16		-2.06	14	36	15	127	7.491	0.01
0.00	-2.52		-2.42	14	36	20	132	7.496	0.00
0.00	-3.19		-3.08	14	36	25	137	7.499	0.00
0.00	-2.63		-2.53	14	36	30	142	7.497	0.00

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.69E-02 CM/SEC FALLING

OW-42.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. OW-42

		DATE= 11/08/90
CASING	DIAMETER=	4 INCHES
SAND	DIAMETER=	12 INCHES
OPEN	INTERVAL=	15 FEET
INITIAL WATER ABOVE TRANS.=		13.25 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00 *	0 0.113357		16	39	12	0	14.548	1.30
0.65	-0.19009 -0.07673		16	39	14	2	14.088	0.84
0.83	-0.08332 0.030033		16	39	16	4	14.322	1.07
0.92	-0.03806 0.075294		16	39	18	6	14.439	1.19
0.67	-0.17125 -0.05789		16	39	20	8	14.125	0.88
0.60	-0.21864 -0.10528		16	39	22	10	14.035	0.78
0.49	-0.30576 -0.19240		16	39	24	12	13.892	0.64
0.58	-0.23570 -0.12235		16	39	26	14	14.004	0.75
0.42	-0.37758 -0.26422		16	39	28	16	13.794	0.54
0.44	-0.35795 -0.24459		16	39	30	18	13.819	0.57
0.59	-0.23200 -0.11864		16	39	32	20	14.011	0.76
0.36	-0.44113 -0.32777		16	39	34	22	13.720	0.47
0.42	-0.38016 -0.26680		16	39	36	24	13.791	0.54
0.57	-0.24402 -0.13066		16	39	38	26	13.990	0.74
0.48	-0.31491 -0.20155		16	39	40	28	13.879	0.63
0.29	-0.53793 -0.42457		16	39	42	30	13.626	0.38
0.42	-0.38183 -0.26847		16	39	44	32	13.789	0.54
0.41	-0.38576 -0.27240		16	39	46	34	13.784	0.53
0.18	-0.73940 -0.62604		16	39	48	36	13.487	0.24

			16	39	50	38	13.644	0.39
0.30	-0.51840	-0.40504	16	39	52	40	13.489	0.24
0.18	-0.73476	-0.62140						

			16	39	54	42	13.551	0.30
0.23	-0.63418	-0.52082	16	39	56	44	13.394	0.14
0.11	-0.95425	-0.84089	16	39	58	46	13.668	0.42
0.32 *	-0.49268	-0.37932	16	40	0	48	13.480	0.23
0.18	-0.75230	-0.63894	16	40	2	50	13.403	0.15
0.12	-0.92796	-0.81460	16	40	4	52	13.338	0.09
0.07	-1.16921	-1.05585	16	40	6	54	13.569	0.32
0.25	-0.60993	-0.49657	16	40	8	56	13.344	0.09
0.07	-1.14160	-1.02825	16	40	10	58	13.415	0.17
0.13	-0.89460	-0.78125	16	40	12	60	13.312	0.06
0.05	-1.31877	-1.20541	16	40	14	62	13.518	0.27
0.21	-0.68454	-0.57118	16	40	16	64	13.270	0.02
0.02	-1.80569	-1.69234	16	40	18	66	13.419	0.17
0.13	-0.88621	-0.77285	16	40	20	68	13.245	-0.01
-0.00	ERR	ERR	16	40	22	70	13.502	0.25
0.19	-0.71230	-0.59894	16	40	24	72	13.547	0.30
0.23	-0.64020	-0.52685	16	40	26	74	13.424	0.17
0.13	-0.87333	-0.75997	16	40	28	76	13.227	-0.02
-0.02	ERR	ERR	16	40	30	78	13.424	0.17
0.13	-0.87160	-0.75824	16	40	32	80	13.199	-0.05
-0.04	ERR	ERR	16	40	34	82	13.440	0.19
0.15	-0.83420	-0.72084	16	40	36	84	13.213	-0.04
-0.03	ERR	ERR	16	40	38	86	13.414	0.16
0.13	-0.89825	-0.78490	16	40	40	88	13.172	-0.08
-0.06	ERR	ERR	16	40	42	90	13.259	0.01

OW-42.TXT

0.01	-2.15919	-2.04583		16	40	44	92	13.179	-0.07
-0.05	ERR	ERR		16	40	46	94	13.193	-0.06
-0.04	ERR	ERR		16	40	48	96	13.208	-0.04
-0.03	ERR	ERR		16	40	50	98	13.342	0.09
0.07	-1.15134	-1.03798		16	40	52	100	13.249	-0.00
-0.00	ERR	ERR		16	40	54	102	13.122	-0.13
-0.10	ERR	ERR		16	40	56	104	13.389	0.14
0.11	-0.96981	-0.85645		16	40	58	106	13.283	0.03
0.03	-1.60093	-1.48758		16	41	0	108	13.404	0.15
0.12	-0.92600	-0.81264		16	41	2	110	13.142	-0.11
-0.08	ERR	ERR		16	41	4	112	13.228	-0.02
-0.02	ERR	ERR		16	41	6	114	13.110	-0.14
-0.11	ERR	ERR		16	41	8	116	13.438	0.19
0.14	-0.83897	-0.72561		16	41	10	118	13.135	-0.11
-0.09	ERR	ERR		16	41	12	120	13.353	0.10
0.08	-1.09982	-0.98646		16	41	14	122	13.093	-0.16
-0.12	ERR	ERR		16	41	16	124	13.343	0.09
0.07	-1.14375	-1.03039		16	41	18	126	13.149	-0.10
-0.08	ERR	ERR		16	41	20	128	13.192	-0.06
-0.04	ERR	ERR		16	41	22	130	13.082	-0.17
-0.13	ERR	ERR		16	41	24	132	13.317	0.07
0.05	-1.28475	-1.17139		16	41	26	134	13.212	-0.04
-0.03	ERR	ERR		16	41	28	136	13.323	0.07
0.06	-1.24771	-1.13435		16	41	30	138	13.217	-0.03
-0.03	ERR	ERR		16	41	32	140	13.343	0.09
0.07	-1.14590	-1.03255		16	41	34	142	13.051	-0.20
-0.15	ERR	ERR		16	41	36	144	13.088	-0.16
-0.12	ERR	ERR		16	41	38	146	13.074	-0.18
-0.14	ERR	ERR		16	42	0	168	13.164	-0.09
-0.07	ERR	ERR		16	42	2	170	13.157	-0.09
-0.07	ERR	ERR		16	42	4	172	13.393	0.14
0.11	-0.95703	-0.84368							

OW-42.TXT

		RISING	HEAD	TEST				
		16	42		10	0	11.825	1.42
1.00	**	0	0.153732		16	42		
0.83	-0.08284	0.070892		16	42	12	2	12.073
0.80	-0.09641	0.057315		16	42	14	4	12.109
0.86	-0.06630	0.087430		16	42	16	6	12.027
0.73	-0.13430	0.019431		16	42	18	8	12.204
0.93	-0.02992	0.123809		16	42	20	10	11.920
0.70	-0.15773	-0.00400		16	42	22	12	12.259
0.58	-0.23685	-0.08312		16	42	24	14	12.424
0.70	-0.15440	-0.00067		16	42	26	16	12.252
0.71	-0.15021	0.003519		16	42	28	18	12.242
0.47	-0.32511	-0.17137		16	42	30	20	12.576
0.61	-0.21334	-0.05961		16	42	32	22	12.378
0.72	-0.14116	0.012571		16	42	34	24	12.221
0.69	-0.15976	-0.00603		16	42	36	26	12.264
0.59	-0.23226	-0.07853		16	42	38	28	12.415
0.40	-0.39938	-0.24565		16	42	40	30	12.682
0.61	-0.21634	-0.06261		16	42	42	32	12.384
0.59	-0.22725	-0.07351		16	42	44	34	12.406
0.59	-0.22999	-0.07625		16	42	46	36	12.411
0.59	-0.23274	-0.07901		16	42	48	38	12.416
0.43	-0.36528	-0.21155		16	42	50	40	12.636
0.36	-0.44414	-0.29040		16	42	52	42	12.738
0.55	-0.25672	-0.10299		16	42	54	44	12.461
0.47	-0.33125	-0.17752		16	42	56	46	12.586
0.46	-0.33473	-0.18100		16	42	58	48	12.591
0.31	-0.50877	-0.35504		16	43	0	50	12.808

			0W-42.TXT				
0.39 **	-0.40471	-0.25097	16	43	2	52	12.689
0.35	-0.45785	-0.30412	16	43	4	54	12.754
0.46	-0.33337	-0.17963	16	43	6	56	12.589
0.48	-0.32023	-0.16649	16	43	8	58	12.568
0.24	-0.62376	-0.47003	16	43	10	60	12.911
0.19	-0.72941	-0.57568	16	43	12	62	12.984
0.28	-0.55775	-0.40401	16	43	14	64	12.856
0.39	-0.40614	-0.25240	16	43	16	66	12.691
0.43	-0.36692	-0.21318	16	43	18	68	12.638
0.42	-0.37954	-0.22581	16	43	20	70	12.655
0.24	-0.61585	-0.46211	16	43	22	72	12.905
0.43	-0.36365	-0.20992	16	43	24	74	12.633
0.39	-0.40829	-0.25456	16	43	26	76	12.694
0.18	-0.74949	-0.59576	16	43	28	78	12.996
0.40	-0.40026	-0.24653	16	43	30	80	12.683
0.22	-0.65567	-0.50194	16	43	32	82	12.935
0.29	-0.54399	-0.39026	16	43	34	84	12.843
0.26	-0.59101	-0.43727	16	43	36	86	12.885
0.21	-0.68430	-0.53056	16	43	38	88	12.955
0.15	-0.81644	-0.66270	16	43	40	90	13.033
0.38	-0.42127	-0.26754	16	43	42	92	12.710
0.34	-0.46395	-0.31022	16	43	44	94	12.760
0.13	-0.88040	-0.72666	16	43	46	96	13.062
0.34	-0.47118	-0.31744	16	43	48	98	12.769
0.31	-0.50764	-0.35391	16	43	50	100	12.807
0.30	-0.52121	-0.36748	16	43	52	102	12.821
0.34	-0.47410	-0.32037	16	43	54	104	12.772
0.29	-0.53209	-0.37836	16	43	56	106	12.832
0.25	-0.60665	-0.45292	16	43	58	108	12.898

OW-42.TXT

0.23	-0.63728	-0.48355	16	44	0	110	12.922	0.33
0.32	-0.50112	-0.34739	16	44	2	112	12.801	0.45
0.27	-0.56777	-0.41404	16	44	4	114	12.865	0.39
0.08	-1.11746	-0.96373	16	44	6	116	13.141	0.11

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 2.37E-03 CM/SEC FALLING

README.txt

ISRT SLUG TEST DATA

This disc includes the raw slug test data collected for the Industri-Plex Site in November 1990.

The files included are:

README.SLG, OW-11.TXT, OW-12.TXT, OW-13.TXT, OW-14.TXT, OW-17.TXT, OW-18.TXT, OW-18A.TXT, OW-19.TXT, OW-19A.TXT, OW-21.TXT, OW-23.TXT, OW-30A.TXT, OW-30B.TXT, OW-31.TXT, OW-32.TXT, OW-36.TXT, OW-37.TXT, OW-38.TXT, OW-39.TXT, OW-40.TXT, OW-41.TXT, OW-42.TXT, TW-1S.TXT, TW-1D.TXT, TW-2S.TXT, TW-2D.TXT, TW-3S.TXT, TW-3D.TXT, TW-4S.TXT, and TW-4D.TXT

The information on this disc corresponds to Appendix C, (Variable Head Test Data) of the final report and includes data on all wells included in the final report.

Some specifications applicable to the interpretation of hydraulic conductivities, are included as a header to the raw data. This information includes casing diameter, sand pack diameter, the open interval, and the initial water level above the transducer. The first three columns of data give the start time for each test in hours, minutes and seconds respectively. The fourth column indicates the elapsed time in seconds that the test was run. Column five gives the water level above the transducer at different times throughout the test and column six represents the difference between column five and the initial water level above the transducer. Column seven is the head ratio and indicates the water levels' return to equilibrium (initial value). It can be seen from the data that as this value approaches zero, column five values (water level above the transducer) return to the initial value. Columns eight and nine are mathematical functions of the head ratio and head respectively.

The type of data (i.e. rising or falling head data) is also indicated at the beginning of each such test. The points selected from the raw data as the best fitting straight line have been indicated by the use of asterisks(*). One asterisk(*) indicates points selected for the falling head test and two asterisks(**) indicates points selected for the rising head tests.

□

TW-1D.TXT

DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. TW-1D

CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 40.0 FEET
 INITIAL WATER ABOVE TRANS.= 16.4 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00	0	0.467101	10	21	28	0	19.332	2.93
0.51	-0.29387	0.173225	10	21	29	1	17.890	1.49
0.31 *	-0.50411	-0.03701	10	21	30	2	17.318	0.92
0.23	-0.64299	-0.17589	10	21	31	3	17.067	0.67
0.20	-0.70491	-0.23781	10	21	32	4	16.978	0.58
0.15	-0.82223	-0.35513	10	21	33	5	16.841	0.44
0.13	-0.88655	-0.41944	10	21	34	6	16.781	0.38
0.10 *	-1.02104	-0.55394	10	21	35	7	16.679	0.28
-0.00	ERR	ERR	10	21	36	8	16.391	-0.01
0.08	-1.10569	-0.63858	10	21	37	9	16.630	0.23
0.08	-1.10875	-0.64165	10	21	38	10	16.628	0.23
0.05	-1.34585	-0.87875	10	21	39	11	16.532	0.13
0.05	-1.26262	-0.79552	10	21	40	12	16.560	0.16
-0.01	ERR	ERR	10	21	41	13	16.372	-0.03
-0.01	ERR	ERR	10	21	42	14	16.373	-0.03
0.04	-1.40680	-0.93970	10	21	43	15	16.515	0.11
			10	21	44	16	16.259	-0.14

TW-1D.TXT								
	ERR	ERR	10	21	45	17	16.456	0.06
0.02	-1.71681	-1.24971	10	21	46	18	16.386	-0.01
-0.00	ERR	ERR	10	21	47	19	16.282	-0.12
-0.04	ERR	ERR	10	21	48	20	16.401	0.00
0.00	-3.42193	-2.95483	10	21	49	21	16.282	-0.12
-0.04	ERR	ERR	10	21	50	22	16.370	-0.03
-0.01	ERR	ERR	10	21	51	23	16.217	-0.18
-0.06	ERR	ERR	10	21	52	24	16.279	-0.12
-0.04	ERR	ERR	10	21	53	25	16.323	-0.08
-0.03	ERR	ERR	10	21	54	26	16.223	-0.18
-0.06	ERR	ERR	10	21	55	27	16.283	-0.12
-0.04	ERR	ERR	10	21	56	28	16.487	0.09
0.03	-1.52889	-1.06179	10	21	57	29	16.336	-0.06
-0.02	ERR	ERR	10	21	58	30	16.524	0.12
0.04	-1.37243	-0.90533	10	21	59	31	16.338	-0.06
-0.02	ERR	ERR	10	22	0	32	16.542	0.14
0.05	-1.31583	-0.84873	10	22	1	33	16.455	0.06
0.02	-1.72581	-1.25871	10	22	2	34	16.549	0.15
0.05	-1.29443	-0.82733						

	ERR	ERR	10	22	3	35	16.243	-0.16
-0.05	ERR	ERR	10	22	4	36	16.258	-0.14
-0.05	ERR	ERR	10	22	5	37	16.248	-0.15
-0.05	ERR	ERR	10	22	6	38	16.459	0.06
0.02	-1.69765	-1.23055	10	22	7	39	16.559	0.16
0.05	-1.26450	-0.79740	10	22	8	40	16.588	0.19
0.06	-1.19227	-0.72517	10	22	9	41	16.275	-0.12
-0.04	ERR	ERR	10	22	10	42	16.361	-0.04
-0.01	ERR	ERR						

		TW-1D.TXT						
		10	22	11	43	16.300	-0.10	
-0.03	ERR	ERR	10	22	14	46	16.739	0.34
0.12	-0.93690	-0.46979	10	22	15	47	16.301	-0.10
ERR	ERR	ERR	10	22	16	48	16.163	-0.24
ERR	ERR	ERR	10	22	17	49	16.017	-0.38
ERR	ERR	ERR	10	22	18	50	15.720	-0.68
ERR	ERR	ERR	10	22	19	51	15.006	-1.39
ERR	ERR	ERR	RISING HEAD TEST					
1.00	0	ERR	10	22	20	0	14.835	-1.56
0.72	-0.14432	ERR	10	22	21	1	15.278	-1.12
0.52 **	-0.28025	ERR	10	22	22	2	15.579	-0.82
0.39	-0.40404	ERR	10	22	23	3	15.783	-0.62
0.33	-0.47613	ERR	10	22	24	4	15.877	-0.52
0.31	-0.50170	ERR	10	22	25	5	15.907	-0.49
0.23	-0.64366	ERR	10	22	26	6	16.045	-0.36
0.19	-0.71562	ERR	10	22	27	7	16.099	-0.30
0.10	-0.99290	ERR	10	22	28	8	16.241	-0.16
0.14	-0.85572	ERR	10	22	29	9	16.182	-0.22
0.09	-1.03108	ERR	10	22	30	10	16.254	-0.15
0.08 **	-1.08445	ERR	10	22	31	11	16.271	-0.13
-0.01	ERR -1.76866		10	22	32	12	16.417	0.02
-0.02	ERR -1.43863		10	22	33	13	16.436	0.04
-0.10	ERR -0.79803		10	22	34	14	16.559	0.16
-0.02	ERR -1.62898		10	22	35	15	16.423	0.02
-0.07	ERR -0.94408		10	22	36	16	16.514	0.11
-0.06	ERR -1.03274		10	22	37	17	16.493	0.09
0.04	-1.44173	ERR	10	22	38	18	16.343	-0.06
-0.03	ERR -1.27539		10	22	39	19	16.453	0.05
0.03	-1.47104	ERR	10	22	40	20	16.347	-0.05

NOTES:

1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
Page 3

TW-1D.TXT

THESE POINTS

2) ALL DEPTHS MEASURED FROM TOP OF CASING

K= 3.20E-03 CM/SEC FALLING
HEAD*

TW-1S.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST
WELL NO. TW-1S
DATE= 11/08/90

CASING	DIAMETER=	2	INCHES
SAND	DIAMETER=	6	INCHES
OPEN	INTERVAL=	10	FEET
INITIAL WATER ABOVE TRANS.=		14.9	FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS.		
			HOURS	MINUTES	SECONDS		(FEET)	HEAD (FEET)	
FALLING HEAD TEST									
1.00 *	0 -0.08281		10	31	2	0	15.726	0.83	
0.22	-0.66466 -0.74748		10	31	3	1	15.079	0.18	
-0.44	ERR	ERR	10	31	4	2	14.532	-0.37	
-0.20	ERR	ERR	10	31	5	3	14.738	-0.16	
-0.06	ERR	ERR	10	31	6	4	14.847	-0.05	
-0.15	ERR	ERR	10	31	7	5	14.772	-0.13	
0.22	-0.66206 -0.74488		10	31	8	6	15.080	0.18	
0.12 *	-0.93593 -1.01875		10	31	9	7	14.996	0.10	
-0.29	ERR	ERR	10	31	10	8	14.664	-0.24	
-0.35	ERR	ERR	10	31	11	9	14.608	-0.29	
-0.21	ERR	ERR	10	31	12	10	14.730	-0.17	
-0.22	ERR	ERR	10	31	13	11	14.715	-0.18	
-0.22	ERR	ERR	10	31	14	12	14.715	-0.19	
0.13	-0.89508 -0.97789		10	31	15	13	15.005	0.11	

TW-1S.TXT									
0.10	-1.00092	-1.08374	10	31	16	14	14.982	0.08	
-0.19	ERR	ERR	10	31	17	15	14.742	-0.16	
-0.12	ERR	ERR	10	31	18	16	14.804	-0.10	
-0.04	ERR	ERR	10	31	26	24	14.870	-0.03	
0.14	-0.84256	-0.92537	10	31	27	25	15.019	0.12	
0.08	-1.07873	-1.16155	10	31	28	26	14.969	0.07	
-0.11	ERR	ERR	10	31	29	27	14.813	-0.09	
-0.04	ERR	ERR	10	31	30	28	14.865	-0.03	
-0.20	ERR	ERR	10	31	31	29	14.737	-0.16	
0.14	-0.83943	-0.92224	10	31	32	30	15.020	0.12	
-0.22	ERR	ERR	10	31	33	31	14.720	-0.18	
-0.01	ERR	ERR	10	31	34	32	14.890	-0.01	
-0.29	ERR	ERR	10	31	35	33	14.657	-0.24	
-0.86	ERR	ERR	10	31	36	34	14.187	-0.71	
			RISING HEAD TEST						
1.00 **	0	ERR	10	31	37	0	13.756	-1.14	
0.31	-0.50673	ERR	10	31	38	1	14.544	-0.36	
0.42	-0.38002	ERR	10	31	39	2	14.423	-0.48	
0.16 **	-0.80700	ERR	10	31	40	3	14.722	-0.18	
0.21	-0.68362	ERR	10	31	41	4	14.663	-0.24	
0.21	-0.68165	ERR	10	31	42	5	14.662	-0.24	
0.33	-0.47983	ERR	10	31	43	6	14.521	-0.38	
0.18	-0.73892	ERR	10	31	44	7	14.691	-0.21	
0.18	-0.75532	ERR	10	31	45	8	14.699	-0.20	
-0.02	ERR	-1.73323	10	31	46	9	14.918	0.02	
-0.01	ERR	-1.77473	10	31	47	10	14.917	0.02	
0.10	-0.98311	ERR	10	31	48	11	14.781	-0.12	
0.16	-0.79923	ERR	10	31	49	12	14.718	-0.18	
0.18	-0.73360	ERR	10	31	50	13	14.689	-0.21	
0.22	-0.66664	ERR	10	31	51	14	14.654	-0.25	
-0.02	ERR	-1.76461	10	31	52	15	14.917	0.02	

TW-1S.TXT

0.15	-0.81491	ERR	10	31	53	16	14.725	-0.18
0.02	-1.67381	ERR	10	31	54	17	14.876	-0.02
0.17	-0.78014	ERR	10	31	55	18	14.710	-0.19
0.05	-1.28264	ERR	10	31	56	19	14.840	-0.06
-0.13		ERR -0.82989	10	31	57	20	15.048	0.15
-0.04		ERR -1.34577	10	31	58	21	14.945	0.05

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.20E-02 CM/SEC FALLING

TW-2D.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. TW-2D

			DATE= 11/08/90
CASING		DIAMETER=	2 INCHES
SAND		DIAMETER=	6 INCHES
OPEN		INTERVAL=	40.0 FEET
INITIAL WATER ABOVE TRANS.=			15.98 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00	0.00	0.33	10	4	45	0	18.103	2.12
0.60	-0.22	0.10	10	4	46	1	17.248	1.27
0.48 *	-0.32	0.01	10	4	47	2	17.004	1.02
0.36	-0.45	-0.12	10	4	48	3	16.738	0.76
0.39	-0.41	-0.09	10	4	49	4	16.801	0.82
0.30	-0.52	-0.19	10	4	50	5	16.625	0.64
0.35	-0.45	-0.13	10	4	51	6	16.727	0.75
0.29	-0.53	-0.20	10	4	52	7	16.605	0.63
0.32	-0.50	-0.17	10	4	53	8	16.651	0.67
0.22	-0.65	-0.32	10	4	54	9	16.454	0.47
0.30	-0.52	-0.19	10	4	55	10	16.623	0.64
0.28	-0.55	-0.23	10	4	56	11	16.573	0.59
0.18	-0.74	-0.41	10	4	57	12	16.368	0.39
0.28	-0.55	-0.22	10	4	58	13	16.577	0.60
0.14	-0.87	-0.54	10	5	0	14	16.269	0.29
0.26	-0.59	-0.27	10	5	1	15	16.523	0.54
0.23	-0.64	-0.32	10	5	2	16	16.462	0.48
0.22	-0.66	-0.34	10	5	3	17	16.442	0.46
0.20	-0.69	-0.37				18	16.411	0.43

			10	TW-2D.TXT 5	4	19	16.126	0.15
0.07	-1.16	-0.84						

0.14	-0.86	-0.53	10	5	5	20	16.275	0.29
0.08	-1.08	-0.75	10	5	6	21	16.158	0.18
0.12	-0.91	-0.58	10	5	7	22	16.242	0.26
0.18	-0.74	-0.41	10	5	8	23	16.368	0.39
0.03	-1.53	-1.21	10	5	9	24	16.042	0.06
0.14 *	-0.86	-0.53	10	5	10	25	16.275	0.29
0.02	-1.66	-1.33	10	5	12	27	16.026	0.05
0.02	-1.66	-1.34	10	5	13	28	16.228	0.25
0.12	-0.93	-0.60	10	5	14	29	15.940	-0.04
-0.02	ERR	ERR	10	5	15	30	16.173	0.19
0.09	-1.04	-0.72	10	5	16	31	16.037	0.06
0.03	-1.57	-1.24	10	5	17	32	15.908	-0.07
-0.03	ERR	ERR	10	5	18	33	15.996	0.02
0.01	-2.13	-1.80	10	5	19	34	15.924	-0.06
-0.03	ERR	ERR	10	5	20	35	16.205	0.22
0.11	-0.97	-0.65	10	5	21	36	16.246	0.27
0.13	-0.90	-0.57	10	5	22	37	16.114	0.13
0.06	-1.20	-0.87	10	5	23	38	15.985	0.01
0.00	-2.61	-2.28	10	5	24	39	16.150	0.17
0.08	-1.10	-0.77	10	5	25	40	15.793	-0.19
-0.09	ERR	ERR	10	5	26	41	15.853	-0.13
-0.06	ERR	ERR	10	5	27	42	16.030	0.05
0.02	-1.63	-1.31	10	5	28	43	16.138	0.16
0.07	-1.13	-0.80	10	5	29	44	15.950	-0.03
-0.01	ERR	ERR	10	5	30	45	15.805	-0.18

TW-2D.TXT								
	ERR	ERR	10	5	31	46	15.930	-0.05
-0.08								
-0.02	ERR	ERR	10	5	32	47	16.116	0.14
0.06	-1.19	-0.87	10	5	33	48	15.851	-0.13
-0.06	ERR	ERR	10	5	34	49	15.793	-0.19
-0.09	ERR	ERR	10	5	35	50	15.855	-0.12
-0.06	ERR	ERR	10	5	36	51	16.055	0.07
0.04	-1.45	-1.13	10	5	37	52	15.912	-0.07
-0.03	ERR	ERR	10	5	38	53	16.091	0.11
0.05	-1.28	-0.96	10	5	39	54	15.855	-0.12
-0.06	ERR	ERR	10	5	40	55	16.042	0.06
0.03	-1.53	-1.21	10	5	41	56	15.799	-0.18
-0.09	ERR	ERR	10	5	42	57	15.857	-0.12
-0.06	ERR	ERR	10	5	43	58	15.757	-0.22
-0.10	ERR	ERR	10	5	44	59	15.940	-0.04
-0.02	ERR	ERR	10	5	45	60	15.947	-0.03
-0.02	ERR	ERR	10	5	46	61	15.999	0.02
0.01	-2.05	-1.72	10	5	47	62	16.068	0.09
0.04	-1.38	-1.05	10	5	48	63	15.887	-0.09
-0.04	ERR	ERR	10	5	49	64	15.812	-0.17
-0.08	ERR	ERR	10	5	50	65	15.999	0.02
0.01	-2.05	-1.72	10	5	51	66	15.765	-0.21
-0.10	ERR	ERR	10	5	52	67	15.684	-0.30
-0.14	ERR	ERR	10	5	53	68	15.852	-0.13
-0.06	ERR	ERR	10	5	54	69	15.887	-0.09
-0.04	ERR	ERR	10	5	55	70	15.826	-0.15
-0.07	ERR	ERR	10	5	56	71	15.661	-0.32
-0.15	ERR	ERR	10	5	57	72	15.808	-0.17
-0.08	ERR	ERR	10	5	58	73	15.877	-0.10
-0.05	ERR	ERR	10	5	59	74	15.777	-0.20
-0.10	ERR	ERR	10	6	0	75	15.988	0.01
0.00	-2.45	-2.12						

TW-2D.TXT

			RISING	HEAD	TEST				
			10	6	43	0	13.978	2.00	
1.00	0.00	0.30	10	6	44	1	14.218	1.76	
0.88 **	-0.06	0.25	10	6	45	2	14.446	1.53	
0.77	-0.12	0.19	10	6	46	3	14.586	1.39	
0.70	-0.16	0.14	10	6	47	4	14.679	1.30	
0.65	-0.19	0.11	10	6	48	5	14.939	1.04	
0.52	-0.28	0.02	10	6	49	6	14.837	1.14	
0.57	-0.24	0.06	10	6	50	7	14.941	1.04	
0.52	-0.28	0.02	10	6	51	8	15.057	0.92	
0.46	-0.34	-0.03	10	6	52	9	14.946	1.03	
0.52	-0.29	0.01	10	6	53	10	15.210	0.77	
0.38	-0.42	-0.11	10	6	54	11	15.338	0.64	
0.32	-0.49	-0.19	10	6	55	12	15.223	0.76	
0.38	-0.42	-0.12	10	6	56	13	15.254	0.73	
0.36	-0.44	-0.14	10	6	57	14	15.175	0.81	
0.40	-0.40	-0.09	10	6	58	15	15.381	0.60	
0.30	-0.52	-0.22	10	6	59	16	15.448	0.53	
0.27 **	-0.58	-0.27	10	7	0	17	15.333	0.65	
0.32	-0.49	-0.19	10	7	1	18	15.321	0.66	
0.33	-0.48	-0.18	10	7	2	19	15.477	0.50	
0.25	-0.60	-0.30	10	7	3	20	15.475	0.51	
0.25	-0.60	-0.30	10	7	4	21	15.364	0.62	
0.31	-0.51	-0.21	10	7	5	22	15.637	0.34	
0.17	-0.77	-0.46	10	7	6	23	15.473	0.51	
0.25	-0.60	-0.30	10	7	7	24	15.705	0.27	
0.14	-0.86	-0.56	10	7	8	25	15.529	0.45	
0.23	-0.65	-0.35	10	7	9	26	15.542	0.44	
0.22	-0.66	-0.36							

				TW-2D.TXT					
0.18	-0.73	-0.43	10	7	10	27	15.610	0.37	
0.13	-0.90	-0.60	10	7	11	28	15.726	0.25	
0.20	-0.69	-0.39	10	7	12	29	15.575	0.40	
0.09	-1.07	-0.77	10	7	13	30	15.808	0.17	
0.08	-1.07	-0.77	10	7	14	31	15.811	0.17	
0.18	-0.75	-0.45	10	7	15	32	15.625	0.36	
0.19	-0.73	-0.42	10	7	16	33	15.604	0.38	
0.16	-0.80	-0.49	10	7	17	34	15.660	0.32	
0.18	-0.75	-0.44	10	7	18	35	15.621	0.36	
0.16	-0.79	-0.48	10	7	19	36	15.652	0.33	
0.04	-1.42	-1.12	10	7	20	37	15.903	0.08	
0.16	-0.80	-0.50	10	7	21	38	15.662	0.32	
0.16	-0.80	-0.50	10	7	22	39	15.663	0.32	
0.17	-0.78	-0.47	10	7	23	40	15.645	0.33	
0.03	-1.48	-1.18	10	7	24	41	15.914	0.07	
0.11	-0.97	-0.67	10	7	25	42	15.765	0.21	
0.03	-1.53	-1.22	10	7	26	43	15.920	0.06	
0.04	-1.35	-1.05	10	7	27	44	15.891	0.09	
0.02	-1.63	-1.32	10	7	28	45	15.933	0.05	
0.01	-1.99	-1.69	10	7	29	46	15.959	0.02	
0.03	-1.53	-1.23	10	7	30	47	15.921	0.06	
0.08	-1.11	-0.80	10	7	31	48	15.823	0.16	
0.15	-0.84	-0.53	10	7	32	49	15.688	0.29	
0.07	-1.18	-0.88	10	7	33	50	15.847	0.13	
0.14	-0.86	-0.56	10	7	34	51	15.705	0.27	
0.10	-1.02	-0.72	10	7	35	52	15.789	0.19	
0.13	-0.89	-0.59	10	7	36	53	15.723	0.26	

TW-2D.TXT

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 7.27E-04 CM/SEC FALLING

TW-4S.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. TW-4S

DATE= 11/08/90

CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES
OPEN INTERVAL= 10 FEET

INITIAL WATER ABOVE TRANS.= 15.68 FEET

WATER

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	ABOVE TRANS. (FEET) HEAD (FEET)	
			HOURS	MINUTES	SECONDS		TIME	TRANS.
FALLING HEAD TEST								
1.00 *	0 -0.49269		11	9	28	0	16.002	0.32
0.29	-0.53299 -1.02568		11	9	29	1	15.774	0.09
0.08	-1.11716 -1.60985		11	9	30	2	15.705	0.02
0.05	-1.34204 -1.83473		11	9	31	3	15.695	0.01
0.01 *	-1.95678 -2.44947		11	9	32	4	15.684	0.00

NOTES:

these points

- 1) *indicates that best fit line passes through
- 2) all depths measured from top of casing

HEAD*

K= 4.40E-02 CM/SEC FALLING

TW-4D.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. TW-4D

DATE= 11/08/90

CASING	DIAMETER=	2 INCHES
SAND	DIAMETER=	6 INCHES
OPEN	INTERVAL=	10.0 FEET
INITIAL WATER ABOVE TRANS.=		14.9 FEET

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)
			HOURS	MINUTES	SECONDS			
FALLING HEAD TEST								
1.00 *	0 0.166688		11	27	31	0	16.368	1.47
0.69	-0.15833 0.008357		11	27	32	1	15.919	1.02
0.10	-1.01959 -0.85290		11	27	33	2	15.040	0.14
0.02 *	-1.72087 -1.55419		11	27	34	3	14.928	0.03
-0.05	ERR ERR		11	27	35	4	14.830	-0.07
0.01	-1.96497 -1.79828		11	27	36	5	14.916	0.02
0.07	-1.17717 -1.01048		11	27	37	6	14.998	0.10
RISING HEAD TEST								
1.00 **	0 -0.03199		11	28	34	0	13.971	0.93
0.56	-0.25528 -0.28728		11	28	35	1	14.384	0.52
0.03 **	-1.59168 -1.62367		11	28	36	2	14.876	0.02
-0.72	ERR ERR		11	28	37	3	15.568	-0.67
-0.43	ERR ERR		11	28	38	4	15.300	-0.40
-0.35	ERR ERR		11	28	39	5	15.229	-0.33
			11	28	40	6	15.242	-0.34

TW-4D.TXT

-0.37	ERR	ERR	11	28	41	7	15.042	-0.14
-0.15	ERR	ERR	11	28	42	8	15.345	-0.44
-0.48	ERR	ERR						

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 5.16E-02 CM/SEC FALLING

TW-3D.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. TW-3D

DATE= 11/08/90
CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED (SEC)	WATER ABOVE TRANS. (FEET)	OPEN INTERVAL= INITIAL WATER ABOVE TRANS.= 10 FEET 15.9 FEET			
			HOURS	MINUTES	SECONDS						
FALLING HEAD TEST											
1.00	0.00	0.03	9	38	12	0	16.970	1.07			
0.65	-0.19	-0.16	9	38	14	2	16.598	0.70			
0.67 *	-0.17	-0.14	9	38	16	4	16.617	0.72			
0.30	-0.52	-0.49	9	38	18	6	16.223	0.32			
0.22	-0.67	-0.64	9	38	20	8	16.130	0.23			
0.10	-1.02	-0.99	9	38	22	10	16.003	0.10			
0.11	-0.96	-0.93	9	38	24	12	16.017	0.12			
0.05	-1.32	-1.30	9	38	26	14	15.951	0.05			
0.02 *	-1.63	-1.60	9	38	28	16	15.925	0.03			
0.08	-1.08	-1.06	9	38	30	18	15.988	0.09			
RISING HEAD TEST											
1.00 **	0.00	0.25	9	40	34	0	14.115	1.79			
0.62	-0.21	0.04	9	40	36	2	14.796	1.10			
0.34	-0.47	-0.22	9	40	38	4	15.296	0.60			

TW-3D.TXT

0.21	-0.69	-0.43	9	40	42	8	15.741	0.16
0.09	-1.05	-0.80	9	40	44	10	15.780	0.12
0.07	-1.17	-0.92	9	40	46	12	15.819	0.08
0.05	-1.34	-1.09	9	40	48	14	15.864	0.04
0.02	-1.69	-1.44	9	40	50	16	15.874	0.03
0.01	-1.84	-1.59	9	40	52	18	15.887	0.01
0.01	-2.14	-1.89	9	40	54	20	15.891	0.01
0.01 **	-2.28	-2.03	9	40	56	22	15.940	-0.04
-0.02	ERR	ERR	9	40	58	24	15.904	-0.00
-0.00	ERR	ERR	9	41	0	26	15.899	0.00
0.00	-3.21	-2.95	9	41	2	28	15.898	0.00
0.00	-3.06	-2.80						

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.09E-02 CM/SEC FALLING

DECEMBER 1990
893-6255

VARIABLE HEAD TEST
WELL NO. TW-3D
DATE= 11/08/90
CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES

OPEN INTERVAL= 10 FEET
INITIAL WATER ABOVE TRANS.= 15.9 FEET

WATER

HEAD RATIO	HEAD RATIO	LOG HEAD	TW-3D.TXT 24-HR CLOCK TIME			ELAPSED (SEC)	ABOVE (FEET)	HEAD (FEET)	
			LOG	HOURS	MINUTES				
FALLING HEAD TEST									
1.00	0.00	0.03		9	38	12	0	16.970	1.07
0.65	-0.19	-0.16		9	38	14	2	16.598	0.70
0.67 *	-0.17	-0.14		9	38	16	4	16.617	0.72
0.30	-0.52	-0.49		9	38	18	6	16.223	0.32
0.22	-0.67	-0.64		9	38	20	8	16.130	0.23
0.10	-1.02	-0.99		9	38	22	10	16.003	0.10
0.11	-0.96	-0.93		9	38	24	12	16.017	0.12
0.05	-1.32	-1.30		9	38	26	14	15.951	0.05
0.02 *	-1.63	-1.60		9	38	28	16	15.925	0.03
0.08	-1.08	-1.06		9	38	30	18	15.988	0.09
RISING HEAD TEST									
1.00 **	0.00	0.25		9	40	34	0	14.115	1.79
0.62	-0.21	0.04		9	40	36	2	14.796	1.10
0.34	-0.47	-0.22		9	40	38	4	15.296	0.60
0.21	-0.69	-0.43		9	40	40	6	15.532	0.37
0.09	-1.05	-0.80		9	40	42	8	15.741	0.16
0.07	-1.17	-0.92		9	40	44	10	15.780	0.12
0.05	-1.34	-1.09		9	40	46	12	15.819	0.08
0.02	-1.69	-1.44		9	40	48	14	15.864	0.04
0.01	-1.84	-1.59		9	40	50	16	15.874	0.03
0.01	-2.14	-1.89		9	40	52	18	15.887	0.01
0.01 **	-2.28	-2.03		9	40	54	20	15.891	0.01
-0.02	ERR	ERR		9	40	56	22	15.940	-0.04
-0.00	ERR	ERR		9	40	58	24	15.904	-0.00
0.00	-3.21	-2.95		9	41	0	26	15.899	0.00
0.00	-3.06	-2.80		9	41	2	28	15.898	0.00

TW-3D.TXT

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 1.09E-02 CM/SEC FALLING

TW-3S.TXT
DECEMBER 1990
893-6255

VARIABLE HEAD TEST

WELL NO. TW-3S

DATE= 11/08/90
CASING DIAMETER= 2 INCHES
SAND DIAMETER= 6 INCHES

HEAD RATIO	HEAD RATIO	LOG HEAD	24-HR CLOCK TIME			ELAPSED TIME (SEC)	OPEN INTERVAL= INITIAL WATER ABOVE TRANS.=	10 FEET 15.77 FEET	WATER ABOVE TRANS. (FEET) HEAD (FEET)				
			FALLING HEAD TEST										
			HOURS	MINUTES	SECONDS								
1.00 *	0.00	0.38	9	7	42	0	18.187	2.42					
0.20	-0.70	-0.32	9	7	44	2	16.253	0.48					
0.08	-1.11	-0.73	9	7	46	4	15.958	0.19					
0.03	-1.47	-1.09	9	7	48	6	15.852	0.08					
0.01	-2.16	-1.77	9	7	50	8	15.787	0.02					
0.00 *	-2.52	-2.14	9	7	52	10	15.777	0.01					
0.00	-2.91	-2.53	9	7	54	12	15.773	0.00					
0.02	-1.66	-1.28	RISING HEAD TEST			14	15.822	0.05					
1.00 **	0.00	0.16	9	9	16	0	14.333	1.44					
0.32	-0.50	-0.34	9	9	18	2	15.314	0.46					
0.14	-0.87	-0.71	9	9	20	4	15.575	0.19					
0.08 **	-1.12	-0.96	9	9	22	6	15.660	0.11					
0.06	-1.24	-1.08	9	9	24	8	15.687	0.08					
			9	9	26	10	15.711	0.06					

TW-3S.TXT								
0.04	-1.39	-1.23	9	9	28	12	15.719	0.05
0.04	-1.45	-1.29	9	9	30	14	15.724	0.05
0.03	-1.50	-1.34	9	9	32	16	15.737	0.03
0.02	-1.64	-1.48	9	9	34	18	15.735	0.04
0.02	-1.61	-1.45	9	9	36	20	15.748	0.02
0.02	-1.81	-1.65	9	9	38	22	15.748	0.02
0.02	-1.82	-1.66	9	9	40	24	15.749	0.02
0.01	-1.84	-1.69	9	9	42	26	15.760	0.01
0.01	-2.14	-1.99	9	9	44	28	15.747	0.02
0.02	-1.80	-1.65	9	9	46	30	15.754	0.02
0.01	-1.94	-1.79	9	9	48	32	15.765	0.01
0.00	-2.44	-2.29	9	9	50	34	15.766	0.00
0.00	-2.54	-2.39	9	9	52	36	15.763	0.01
0.00	-2.33	-2.18	9	9	54	38	15.763	0.01
0.00	-2.31	-2.15	9	9	56	40	15.768	0.00
0.00	-2.78	-2.62	9	9	58	42	15.767	0.00
0.00	-2.65	-2.49						

THESE POINTS

NOTES:

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 2.27E-02 CM/SEC FALLING

893-6255

TW-2S.TXT
DECEMBER 1990

VARIABLE HEAD TEST

WELL NO. TW-2S

DATE= 11/08/90
 CASING DIAMETER= 2 INCHES
 SAND DIAMETER= 6 INCHES
 OPEN INTERVAL= 10.0 FEET
 INITIAL WATER ABOVE TRANS.= 18.2 FEET

HEAD RATIO	HEAD RATIO	24-HR CLOCK TIME			ELAPSED TIME (SEC)	WATER ABOVE TRANS. (FEET)	HEAD (FEET)	
		LOG	HOURS	MINUTES	SECONDS			
1.00	0		9	55	0	0	18.60	0.40
1.00	0		9	55	2	2	18.62	0.42
1.02	0.010365		9	55	4	4	18.61	0.41
1.04	0.017380		9	55	6	6	18.62	0.42
1.01	0.005706		9	55	8	8	18.61	0.41
1.03	0.011825		9	55	10	10	18.61	0.41
1.00	0.000499		9	55	12	12	18.60	0.40
1.06	0.023575		9	55	14	14	18.62	0.42
1.03	0.013039		9	55	16	16	18.61	0.41
1.01	0.004719		9	55	18	18	18.61	0.41
1.03	0.012797		9	55	20	20	18.61	0.41
1.04	0.018339		9	55	22	22	18.62	0.42
1.03	0.013766		9	55	24	24	18.61	0.41
1.00	0.000748		9	55	26	26	18.60	0.40
1.04	0.015697		9	55	28	28	18.62	0.42
1.00	0.001993		9	55	30	30	18.60	0.40
1.03	0.014732		9	55	32	32	18.62	0.42
1.01	0.006199		9	55	34	34	18.61	0.41
1.05	0.019295		9	55	36	36	18.62	0.42
			9	55	38	38	18.61	0.41

TW-2S.TXT								
1.03	0.013281	9	55	51.5	51.5	18.61	0.41	
1.02	0.007183	9	55	52.5	52.5	18.46	0.26	
0.65	-0.18455	9	55	53.5	53.5	18.69	0.49	
1.23	0.090324	9	55	54.5	54.5	18.69	0.49	
1.23	0.089308	9	55	55.5	55.5	18.57	0.37	
0.92	-0.03836	9	55	56.5	56.5	18.61	0.41	
1.03	0.013766	9	56	2.5	62.5	18.65	0.45	
1.12	0.049739	9	56	3.5	63.5	18.49	0.29	
0.72	-0.14236							
1.29	0.109374	9	56	4.5	64.5	18.72	0.52	
1.94	0.288378	9	56	5.5	65.5	18.98	0.78	
1.00 *	0	FALLING HEAD TEST	9	56	6.5	0	19.77	1.57
0.36	-0.43845		9	56	7.5	1	18.77	0.57
0.09 *	-1.06067		9	56	8.5	2	18.34	0.14
0.19	-0.71632		9	56	9.5	3	18.50	0.30
0.22	-0.65974		9	56	10.5	4	18.54	0.34
0.25	-0.59663		9	56	11.5	5	18.60	0.40
0.21	-0.67607		9	56	12.5	6	18.53	0.33
0.20	-0.70712		9	56	13.5	7	18.51	0.31
0.23	-0.64035		9	56	14.5	8	18.56	0.36
0.28	-0.55645		9	56	20.5	14	18.64	0.44
0.14	-0.85203		9	56	21.5	15	18.42	0.22
0.32	-0.50148		9	56	22.5	16	18.70	0.50
0.15	-0.83251		9	56	23.5	17	18.43	0.23
0.01	-2.27842		9	56	24.5	18	18.21	0.01
-0.08	ERR	RISING HEAD TEST						

			TW-2S.TXT				
1.00 **	0	9	56	28.5	0	18.85	0.65
0.84	-0.07789	9	56	29.5	1	18.75	0.55
0.82	-0.08850	9	56	30.5	2	18.73	0.53
0.61 **	-0.21743	9	56	31.5	3	18.60	0.40
0.50	-0.30351	9	56	32.5	4	18.52	0.32
0.66	-0.17911	9	56	33.5	5	18.63	0.43
0.81	-0.08888	9	56	34.5	6	18.73	0.53
0.36	-0.44048	9	56	35.5	7	18.44	0.24
0.51	-0.29283	9	56	36.5	8	18.53	0.33
0.45	-0.34297	9	56	37.5	9	18.50	0.30
0.74	-0.13082	9	56	38.5	10	18.68	0.48
0.71	-0.15145	9	56	39.5	11	18.66	0.46
0.62	-0.20839	9	56	40.5	12	18.60	0.40
0.47	-0.33227	9	56	41.5	13	18.50	0.30
-0.42	ERR	9	56	42.5	14	17.93	-0.27
-0.12	ERR	9	56	43.5	15	18.12	-0.08

NOTES:

THESE POINTS

- 1) * INDICATES THAT BEST FIT LINE PASSES THROUGH
- 2) ALL DEPTHS MEASURED FROM TOP OF CASING

HEAD*

K= 4.77E-02 CM/SEC FALLING